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SAIMS 2010

Hosted by the
Department of Management
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Grahamstown
South Africa

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SAIMS CONFERENCE 2010

The Department of Management at Rhodes University hereby invites you to attend the 22nd Annual Conference of the Southern Africa Institute for Management Scientists (SAIMS).

CONFERENCE THEME

A discourse on the influence of management. Does it matter?

CONFERENCE DATES: 12 – 15 September 2010

CONFERENCE VENUE: Mpekweni Beach Resort

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SAIMS 2010 CONFERENCE PROGRAMME

SOUTHERN AFRICA INSTITUTE FOR MANAGEMENT SCIENTISTS CONFERENCE 2010

SUNDAY 12 SEPTEMBER 2010

REGISTRATION VENUE: BEN MACALA, MPEKWENI BEACH RESORT

16h00-17h45

WELCOME COCKTAIL FUNCTION: OYSTER BAR, MPEKWENI BEACH RESORT
Prof Arthur Webb, Dean: Faculty of Commerce, Rhodes University

18h00

MONDAY 13 SEPTEMBER 2010

REGISTRATION: BEN MACALA, MPEKWENI BEACH RESORT

07h45-08h30

WELCOME AND OPENING

Dr Saleem Badat, Vice-Chancellor, Rhodes University

08h30-09h00

Prof Lynette Louw, Conference Chair, Head: Department of Management, Rhodes University

KEYNOTE SPEAKER

Dr Casper Kruger **“Protecting your brand reputation during a global onslaught”**

09h00-10h00

Vice President: Hino Trucks, Toyota South Africa Motors

TEA, COFFEE AND REFRESHMENTS – Patio or Foyer

10h00-10h45

KEYNOTE SPEAKER

Ms Leticia Greyling **“Business at a crossroad – towards sustainable solutions”**

10h45-11h45

Lecturer: Rhodes University Investec Business School

WORD OF THANKS AND CONFERENCE HOUSEKEEPING

11h45-12h00

Mr Trevor Amos, Conference Organiser, Department of Management, Rhodes University

SAIMS ANNUAL GENERAL MEETING

12h00-13h00

Prof Elmarie Venter, Chairperson, SAIMS Board of Directors 2010

LUNCH – Mlambo Restaurant

13h00-14h00

Mon 13 Sept	Track 1: Marketing Chair: Prof. C. Boshoff Room: Ben Macala	Track 2: HR/Leadership Chair: Prof. C. Jonker Room: Oystercatcher A	Track 3: SMME/ Entrepreneurship Chair: Prof. C. Nieuwenhuizen Room: Oystercatcher B	Track 4: General Management Chair: Mr. O. Fatoki Room: Billiard Room
14h00-14h25	Validation of a Customer Service Measuring Instrument for the Ophthalmology Industry - Prof. C A. Bisschoff and Mr. A. Kadé	Sense of Coherence and Organisational Commitment: A Case Study in a Selected South African Parastatal - Prof. C-H. Mayer, Prof. L. Louw and Mr. M. J. Louw	South African Businesses: One Step Closer to Becoming Entrepreneurial - Dr D. Groenewald and Prof. J. J. Van Vuuren	Information Sources to Select a Higher Education Institution - A Comparison Between Junior and Senior Students - Mr. T. Du Plooy and Prof. J. De Jager
14h30-14h55	The Contribution of Eye Tracking in E-Commerce Web Site Usability Evaluations - Prof. A. Calitz, Mr. M. Pretorius and Dr. C. Adendorff	Theoretical and Practical Perspectives of Employee Wellness Programmes at Selected South African Universities – Ms. L. Gie and Prof. B. Rust (WIP)	An Investigation into the Entrepreneurial Intent of Rural University Students In the Limpopo Province - Mr. M. J. Malebana	Factors Affecting Prospective Students' Choice When Choosing a Higher Education Institution in South Africa - Mrs. I. Lubbe
15h00-15h25	Improving CRM Success through Effective Launching Tactics - Dr. O. Dayan and Prof. C. A. Arnolds	Work and Family Involvement of Managers in the South African Automotive Industry - Ms. M. Paddey and Prof. G.G. Rousseau	Exploring Women Entrepreneurship in Southern Africa - Prof. S. Van Der Merwe, Ms. A. Kock, Mr. M. Lebakeng and Ms. N. Meyer	Why Choose South Africa: Insights from International Undergraduate Students - Dr. M. Mpinganjira
15h30-16h00	TEA			

Mon 13 Sep	Track 1: Marketing Chair: Prof. E. Venter Room: Ben Macala	Track 2: HR/Leadership Chair: Prof. C-H. Mayer Room: Oystercatcher A	Track 3: SMME/ Entrepreneurship Chair: Dr. S. Farrington Room: Oystercatcher B	Track 4: General Management Chair: Prof. L. Louw Room: Billiard Room
16h00-16h25	Determining the Underlying Factors of Passengers to Consider when Selecting a South African Domestic Passenger Airline: An Exploratory Study - Dr. C. De Meyer and Prof.G. Mostert	Emotion Work, Emotional Intelligence, Social Support and Job Autonomy as Predictors Burnout in Secondary School Educators in Gauteng - Prof. C. Jonker	Measuring Corporate Entrepreneurial Intensity in the Telecommunications Sector - Mr. P. Abrahams and Mr. R. Roberts (WIP)	Content Analysis of Management Research Published in Management Dynamics - Prof. M. Wiese, Ms. N. Kean, Ms. D. Luiz and Prof. Y. Jordaan
16h30-16h55	Retaining Customers in the South African Long-Term Insurance Industry - A Case Study Perspective - Mr. L Du Plessis and Prof. M Roberts-Lombard	The Evaluation of a Work-Related Well-Being Intervention - Dr L.I. Jorgensen and Prof. S. Rothmann	The Role of the Online Game "Urgent Evoke" in Developing Social Entrepreneurial Competencies: A Case Study Post-Graduate Management Students - Mr. P. N. Midgley, Mr. M.J. Louw and Prof. L. Louw (WIP)	The Profile of Business Management Academics at Universities in South Africa - Prof. C. Nieuwenhuizen
17h00-17h25	Residents' Role in the Co-Creation of South Africa as a Brand: A World Cup Event - Dr. A. Berndt, Dr H.B. Klopper, Ms. C. Meintjes and Dr. I. Niemann-Struweg (WIP)	Fostering Resilience: Striking a Balance Between Personal Adaptability and Performance of Chronically Ill Employees - Mr. H. Kanengoni, Mr. H. Tomu and Ms. M. Harunavamwe (WIP)	Entrepreneurial Skills Development: a Paradigm Shift - Dr. J.H. Van Zyl (WIP)	Managing Research at a University - Mr. P. Giannakopoulos and Dr. S. Buckley

Tue 14 Sept	Track 1: Marketing Chair: Prof. N. Terblanche Room: Ben Macala	Track 2: HR/Leadership Chair: Mr. M.J. Louw Room: Oystercatcher A	Track 3: SMME/ Entrepreneurship Chair: Prof. S. Perks Room: Oystercatcher B	Track 4: General Management Chair: Mr. T.L. Amos Room: Billiard Room
08h30-8h25	Service Quality Perceptions in the Uganda Mobile Telephone Branch of Industry - Dr. J. M. Byarugaba, Prof. M. Tait and Prof. J. K. Bosch	The Role of Experience in Developing Social Competencies - Mr J. Daya, Prof. L. Louw and Dr. N. Pearse	The Influence of Selected Demographic Variables on the Success of Copreneurships - Ms. C. Eybers, Dr. S. Farrington, Prof. E. Venter and Prof. C. Boshoff	Environmental Shareholder Value Creation at a South African Chemical Company - Mr. T. Maduna and Dr. S. Viviers (WIP)
09h00-9h25	Quality Service Delivery in Higher Education: Focus on Tangibility - Dr. T. Drotsky, Prof. J. De Jager and Ms. R. Honiball	Testing the Reliability of the ten item Personality Inventory (Tipi) Measure within a South African context - Ms. L. Kruger and Prof. P. G. Mostert	Barriers to the Growth of New Small Ventures in South Africa: A Principal Component Analysis Approach - Mr. O. Fatoki and Mr. D. K. Garwe	Environmental Literacy: A Needs Analysis - Mr. R. Lillah and Dr. S. Viviers (WIP)
09h30-9h55	What Big Girls are made of: Female Portrayals in South African Television Commercials - Ms. T. Holtzhausen, Prof. Y. Jordaan and Prof. E .J. North	Causality Between Employee Engagement and Customer Experience within the Context of Organisational Climate and Culture – Dr. A. Drotskie and Dr. R. Viljoen	The Impact of the Business Environment on the Availability Trade Credit to New SME'S in South Africa - Mr. O. Fatoki and Prof. A. Van Aardt Smit	Challenges Corporate Governance Compliance from a Management Perspective: A Post-King III Analysis - Mr. T. Mariri and Dr. C. Chipunza (WIP)
10h00-10h25	Service Quality Dimensions: The Case of an Independent School - Ms. E. Meyer and Dr. A. Berndt	The State of Skills in South Africa: Between General Shortage and Misalignment - Where does the Problem lie? - Mr. M. O. Samuel and Prof. R. D. Thakhathi	Debt and Solvency of SME's in South Africa - Mr. O. Fatoki and Prof. M. Roberts-Lombard	Eskom's Financial Position 1996 To 2009: A High Level Review - Mr. J. Hefer
10h30-11h00	TEA			

Tue 14 Sept	Track 1: Marketing Chair: Prof. R. Elliott Room: Ben Macala	Track 2: HR/Leadership Chair: Dr. C. Bischoff Room: Oystercatcher A	Track 3: SMME/ Entrepreneurship Chair: Ms. T. Holtzhausen Room: Oystercatcher B	Track 4: General Management Chair: Mr. J. Hefer Room: Billiard Room
11h00-11h25	Customer Complaint Behaviour: An Exploratory Study Among Restaurant Patrons - Prof. P. Mostert, Prof. D. Petzer and Dr. C. De Meyer	A Manufacturing Perspective of Employee Engagement in the Workplace - Prof. E.E. Smith and Prof. R. J. Muller	The use of Consultants Versus Independent Strategy Formation for Small and Medium Business: Preliminary Findings - Mrs. C. Kennedy, Dr. M. Bounds and Dr. G. A. Goldman	The use of Hedonic Pricing in the Valuation of South African Wines - Mr. D. A. Priilaid and Prof. P. Van Rensburg
11h30-11h55	Customer Perceptions of Green Marketing in the Port Elizabeth Retail Industry - Prof. S. Perks and Ms. A. Guscott	Investigating the Relationship Between Diversity, Inclusion and Individual Performance - Ms. P. Daya (WIP)	Difficult Economic Conditions: Are Layoffs in the Human Resources Business Function the Answer for SMMEs? - Ms. C. Rootman and Ms. J. Krüger	The Personal Financial Knowledge, Attitudes and Generation Y Characteristics of NMMU Students - Prof. M. Struwig and Ms. F. du Plessis
12h00-12h25	Attitudes of South African and United States Students Towards Marketing Practices: A Country-of-Origin Perspective - Prof. D.J. Petzer, Prof. P.G. Mostert and Prof. T.F.J. Steyn	The Relation Between Employee Remuneration Gaps and Labour Productivity: The Gauteng Manufacturing Industry as a Case Study - Prof. G. Van Zyl	An Exploratory Study of the Factors Influencing Non-Family Employee Commitment to the Family Business - Prof. E. Venter, Dr. S. Farrington and Ms. C. Finkelstein	Time Varying International Stock Market Co-Movement: Considerations for South African Investors - Dr. J. De Beer and Ms. A. Pretorius
12h30-12h55	Cellphone Usage and the Sources of Information: The Role of Age – Dr. N. Rammile	What Happens During Those Long Hours Next to the Road? An Exploratory Study Three Informal Day-Labour Hiring Sites in Tshwane - Prof. C. J. Schenck, Mr. L. Xipu and Dr. P.F. Blaauw (WIP)	The Perceived Impact of Broad-Based Black Economic Empowerment on Small and Medium-Sized Family Businesses: An Exploratory Study – Prof. S. Van Der Merwe and Mr. D. Orton	Factors Influencing the Bilateral Intra-Industry Trade within South Africa's Automobile Industry - Prof. A. C. Jordaan and Ms. M. Y. Damoense
13h00-14h00	LUNCH			

Tue 14 Sept	Track 1: Marketing Chair: Dr. D. Groenewald Room: Ben Macala	Track 2: HR/Leadership Chair: Dr. A. Berndt Room: Oystercatcher A	Track 3: SMME/ Entrepreneurship Chair: Prof. S. van der Merwe Room: Oystercatcher B	Track 4: General Management Chair: Dr. K. Ramdass Room: Billiard Room
14h00-14h25	The Role of Customer Involvement in the Formation of Customer Loyalty in Different Types of Retail Environments - Prof. N. S. Terblanche and Prof. C. Boshoff	The Relationship Between Leadership, Employee Engagement, and Customer Satisfaction within a Motor-Vehicle Dealership Network in the Eastern Cape - Ms C. Page, Mr. T.L. Amos and Mr. M.J. Louw (WIP)	Determinants of Capital Structure of Small and Medium Enterprises in the Buffalo City Municipality, Eastern Cape Province, South Africa - Ms. E.C. Rungani and Mr. O. Fatoki	Internet Usage amongst South African Women - Mr. M. G. Jere and Ms. S. V. Davis
14h30-14h55	The Reliability of Data from Guest Reviews on Tripadvisor as a Contemporary Social Media Platform - Mr. W. Hensens , Prof. M. Struwig and Dr. O. Dayan	An Investigation into the Team Input Factors Influencing the Success of Family Businesses - Dr. S. Farrington, Prof. E. Venter and Prof. C. Boshoff	Toward Strategic Integration of Small Business Policy Interventions and Programmes: Lessons From Botswana - Prof. Z. Muranda and Mr. Z. Temtime (WIP)	Is there a Light at the End of the Tunnel Regarding IT Projects? - Dr. C. Marnewick
15h00-15h25	Can Service Firms Overdo Service Recovery? - Prof. C. Boshoff (WIP)	The Perceptions of Different Stakeholders about Leadership Roles in the Event Management Industry - Ms. S. Maree and Prof. H.E.C. De Bruyn (WIP)	Angel Networks as a Business Start Up Financing Option in South Africa - Mr. Z. Sibanda and Mr. S. Zindiye (WIP)	Has Technological Innovations Resulted in Increased Efficiency and Cost Savings for Banks' Customers? - Mr. M. Musara and Mr. O. Fatoki
15h30-16h00	TEA			

Tue 14 Sept	Track 1: Marketing	Track 2: HR/Leadership	Track 3: HR/Leadership	Track 4: General Management
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16h00-16h25	An Investigation of Contemporary Customer-centric Strategies by Clothing Retailers: A Focus on Alice Town, Eastern Cape, South Africa - Ms. R A. Chihombori and Mr. R. Masocha (WIP)	An Investigation into Racism Amongst Students at a South African University - Ms. C. Tebele, Dr. K. Nel and N. Mrs. N. Dodd	The Leadership Development of Students at a Higher Education Institution - Ms. A. Motala, Ms.C. Jacobs, Mr. M. Kaliika, Mr. K. Patel and Mr. T. L. Amos	Factors Impacting on E-Business Implementation In Kenya: A Hypothetical Model - Prof. S. Perks, Prof. J. K. Bosch and Dr. J. K. Muteti
16h30-16h55	Environmental Factors Impacting on Total Brand Image in the Banking Industry - Dr. O. Dayan, Mr. G. P. Manthe and Mr. A. Marriott (WIP)	Trainability, Internalised Racism and Core Self-Evaluation in Post-Apartheid South Africa - Mrs. N. Dodd (WIP)	The Relationship Between Principal Leadership, Staff Engagement and Pupil Engagement: A Case-Study of a Public School - Ms. K. Campbell, Ms. H. Lufele, Mr. W. Hardy, Ms. L. Steele and Mr. T. L. Amos (WIP)	The Impact of Assembly Line Balancing within the Clothing Industry in South Africa - Dr. K. Ramdass
19h00	GALA DINNER: MLAMBO RESTAURANT			

Wed 15 Sept	Track 1: Marketing	Track 2: HR/Leadership	Track 3: General Management	Track 4: General Management
	Chair: Mr M. G. Jere Room: Sandpiper	Chair: Dr. A. Drotskie Room: Oystercatcher A	Chair: Prof. I. Visser Room: Oystercatcher B	Chair: Dr. S. Viviers Room: Billiard Room
09h00-9h25	A Framework for the use of Focus Groups In Marketing Research in South Africa - Dr. B. Dube, Prof. C. Jooste and Prof. M. Roberts - Lombard (WIP)	The Workplace antecedents of the Intention to Emigrate – Ms. A. Coetzee, Dr. B. Linde and Prof. J. Pienaar	Drivers, Forces and Factors in the Business Environment - Prof. H. E.C. De Bruyn and Mr. D. Rossouw	Improving the Financial Efficiency of Pension Funds In Kenya - Mr A. G. Njuguna and Prof. C. Arnolds
09h30-9h55	A Cross Cultural Comparison of Factors Driving the Propensity to Purchase Online: South Africa and Germany - Prof. R. Elliott, Mr. L. H. Achterberg and Mr. O. Roll (WIP)	Human Resource Personnel Perception Towards the Promotion of Ethical Behaviour in the Workplace. A Case on Selected Organizations - Mr. H. Tomu, Mr. T. Kabungaidze and Mr. H. Ngirande (WIP)	The Influence of Emotional Intelligence of Leaders on Leadership Effectiveness - Mrs. J. Chipumuro, Prof. L. Louw and Prof. R. Van Niekerk (WIP)	The Relationship Between SMEs and Insurance Companies from an SME Perspective: The case of SMEs in Nelson Mandela Metropolitan Area - Ms. K.Chodokufa, N.Chiliya and B. Afolabi
10h00-10h25	The Influence of Price Premium and Product Type on the Choice of Cause-Related Marketing Brands - Ms. D. Human and Ms. M. Ross (WIP)	A Comparative Analysis of the Chinese and South African Work Ethic - Prof. A. Slabbert (WIP)	Women Who Conquer: The Business Advantage - Mrs. M. Doubell (WIP)	The Role of Aspiration in Value Perceptions in the South African Motor Industry - Ms. V. Mashaba and Prof. M. Jansen Van Rensburg (WIP)
10h30-11h00	The Influence of Trade Characters on the Recognition, Recall and Preferences of Generation Z Consumers - Ms. D. Human and Ms. C. Pfeiffer (WIP)	The Impact of Strategic Leadership on Operational Strategy and Organisational Performance in Business Organisations in South Africa - Mr. J. J. Serfontein and Prof. J. Hough	The Role of Emotional Intelligence in the Success of South African University Students - Mrs. J. Puchert and Prof. R. Elliott (WIP)	Business Research and the use of Dialectical Realism in Cause and Meaning of Methodological Triangulation: A Theoretical Analysis - Prof. D.A.L. Coldwell
11h00	TEA			

Wed 15 Sept	Track 1: Marketing	Track 2: HR/Leadership	Track 3: General Management	Track 4: General Management
	Chair: Prof. M. Roberts-Lombard Room: Sandpiper	Chair: Dr. J. Strydom Room: Oystercatcher A	Chair: Mr. D. Rossouw Room: Oystercatcher B	Chair: Mr .M. Maritz Room: Billiard Room
11h30-11h55	Online Word of Mouth Advertising on Social Networking Sites: Exploring Attitudes and Behaviours – Ms. F. Kharwa and Dr. A. Strasheim (WIP)	The Factors that Influence the Retention of Academics at a Tertiary Education Institution: An Exploratory Study - Ms. C. Wilmot, Mr. B. Williams, Ms. J. Guest and Mr. T. L. Amos	Strategic Planning in Selected Municipalities in the Eastern Cape - Mr. M. J. Louw, Ms. B. Pringle and Prof. L. Louw (WIP)	A Business Report on Branding for a Firm in the Container Handling Industry – Ms. L. Mabuza, Mr. F. Moosa, Mr. T. Ndlovu, Mr. A. Waddington and Mr. M. Maritz (WIP)
12h00-12h25	Consumer Perceptions on Private Label Brands: An Eastern Cape University-Aged Analysis - Mr. B. D. Mpofo and Mr. S. Zindiye (WIP)	A Comparative Analysis of Management Academics' Views of the Measurability and Equity in Workloads and Effects on Knowledge Creation: Towards a Model of Effective Knowledge Management in Higher Education - Prof. D.A.L. Coldwell and Prof. K. Stanz (WIP)	An Exploratory Study of the Impact of Selected Stakeholder Groups on Family Harmony and Continuity in Family Businesses - Ms. I. Visser, Ms. J. Strydom and Prof. E. Venter (WIP)	Culture and its Individual and Institutional Contextual effects in South African University Research Productivity: the Role of Human Resources Management - Mr. C. W. Callaghan (WIP)
12h30-12h55	Investigating the Usefulness of Electronic Word-of-Mouth in the Marketing Process - Ms. L-M. Weppenaar, Ms. S. De Kock, Mr. J. Nel, Dr. J. Van Zyl and Dr. W. Vermeulen (WIP)	Internal Marketing: Stepping Stones and Stumbling Blocks in Selected South African Public Hospitals - Prof. A .A. Rust and Prof. J. W. De Jager (WIP)	Do Birds of a Feather Flock Together? The Role of Fashion in Social Interaction Amongst the Youth - Ms. M. F. Serumula and Prof. A. F. Grobler (WIP)	The Relationship Between Leadership and Employee Engagement in a South African University - Mr. Maritz and Mr.T. L. Amos (WIP)
13h00	CONFERENCE ADJOURNS. THANK YOU VERY MUCH FOR YOUR ATTENDANCE. WISHING YOU A SAFE JOURNEY HOME!			

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SAIMS 2010

6 September 2010

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	Submitted	Accepted
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Work in Progress Stream	56	46 (82%)
Total	134	114 (85%)

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Prof	Van Aardt Smit	University of the Free State
Prof	Willie Van Der Merwe	University of the Free State

Kind regards

L. Louw

Prof L Louw

On behalf of the SAIMS 2010 Conference Organising Committee

COMPETITIVE PAPERS

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THE FACTORS THAT INFLUENCE THE RETENTION OF ACADEMICS AT A TERTIARY EDUCATION INSTITUTION: AN EXPLORATORY STUDY

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ABSTRACT

The retention of employees is one of the greatest challenges facing the organisations of today. Considering the turbulent state of the economy and the external environment, the ability to attract, employ and retain core employees is essential to any organisation. This is because voluntary staff turnover imposes significant costs on both the organisation and the employee concerned. This is especially true in South Africa, in particular, South African universities, where labour turnover and staff retention represent major challenges. Therefore, the aim of this study is to identify and examine those factors which underpin the retention cognitions of academic staff at a specific tertiary education institution. Data was collected from one hundred respondents across a wide range of demographic groupings. The results showed no significant differences in opinion between the highest qualifications obtained; the current job positions; and the faculties, concerning each of the eight staff retention factors. Rather, significant differences in average retention factor scores were found between males and females, regarding economic factors, as well as between the various age groups, regarding job factors. The implications of these findings and further recommendations are discussed.

INTRODUCTION

The retention of employees is one of the greatest challenges facing the organisations of today. South African universities, in particular, present an interesting case as one of the greatest challenges in this industry is labour turnover and staff retention (Klaas, 2007: 1). The problem is that staff numbers are diminishing within universities and this has resulted in major pressure being placed on the remaining academics.

Trevor (2001, cited in Sutherland and Jordaan, 2004: 56) states that there have been over one thousand studies undertaken concerning labour turnover, but there have been very few conducted in terms of academic staff. Previous studies concerning employee retention in general indicated that factors such as the quality of leadership and the relationship with managers were relevant in decreasing labour turnover, together with opportunities to achieve personal and professional goals, as well as innovate and improve systems (Nompula, 2007: 71). Sutherland and Jordaan (2004) showed similar results to that of Nompula (2007) with the most important factors including the lack of challenging work and the level of trust the employee has in the management of the organisation. A study conducted by Tettey in 2006 concerned the retention of academic staff at African universities. The results pertaining to the University of Kwazulu Natal (UKZN) showed that while the majority of academic staff had considered leaving the institution, the number of staff that had actually looked for jobs, or received job offers, was negligible (Tettey, 2006: 25-26). However, factors regarding the workload and sufficient recognition and reward for academic achievement were found to be problematic (Tettey, 2006).

Therefore, in order for an institution to maintain its steadfast competitive advantage, it needs to identify factors that retain talented individuals within the institution. Thus, the aim of this study is to explore the factors that academics consider most important in their retention and therefore decrease the amount of labour turnover in the sector.

PROBLEM INVESTIGATED

The research problem is to identify the factors that influence the retention of academics at a particular higher education institution.

RESEARCH QUESTIONS

The review of literature led to the formulation of the following research questions:

- What are the most relevant and irrelevant factors that affect the retention of academics at a particular higher education institution?

- Is there a significant difference in the average factor score (for each factor) between males and females?
- Are there significant differences in the average staff retention factor (for each factor) between the various age groups; the highest qualification obtained; the current job position; and the faculties?

LITERATURE REVIEW

Appointing talented individuals is difficult, but retaining them can be even more difficult (Butler and Waldroop, 2001: 180). No organisation likes to “see talent leave and when a good employee walks, the business takes a hit” (Cappelli, 2000: 27). Firstly, the departure of a talented employee can feel like a personal affront to executives, who pride themselves in instilling loyalty in individuals (Cappelli, 2000: 29). Secondly, talent is often difficult and expensive to replace, especially in light of today’s tight labour market (Cappelli, 2000: 29). Managers have often found that retaining staff is easier and possibly more important than recruiting new staff (Coombs, 2009: 234). The reason for this being that large amounts of time and capital are needed to train and develop new employees (Coombs, 2009: 234). Finally, employees who leave, take with them valuable knowledge and expertise gained through experience, as well as reduce effectiveness within the organisation (Coombs, 2009: 233; Salisbury and Shepsle, 1981: 381, cited in Anderson, 1990: 132; Terence, Brooks and Thomas, 1993: 96). Therefore, it is of paramount importance that an organisation strives to achieve optimal retention of employees, which refers to the employer’s operationalised ability to retain the current employees it wants to keep (Coombs, 2009: 233; Sutherland, 2004: 5).

Traditionally, retention has been greatly influenced by several major related aspects, being, job satisfaction, job alternatives and organisational commitment (Terence *et al.*, 1993: 97). Extensive research has shown that overall satisfaction, with regards to compensation, supervision, the work environment, chances for promotion and so on, is strongly linked to employee turnover, and that improvements in job satisfaction are more likely to result in a greater retention of staff (Currivan, 1999: 497; Terence *et al.*, 1993: 97). Conversely, those individuals who are not satisfied in their jobs will be more likely to leave the organisation (Terence *et al.*, 1993: 97). Given the same level of dissatisfaction, those individuals with more job alternatives will be more inclined to leave the organisation than those with fewer alternatives (Terence *et al.*, 1993: 97). Job dissatisfaction has since been described as the single most important and common cause of employee turnover within an organisation, and one can clearly see the importance of focusing on this through effective job design and the creation of favourable work environments, to ensure optimal retention of employees

(Terence *et al.*, 1993: 97). Organisational commitment, the degree to which an employee feels loyal toward an organisation (Currivan, 1999: 497) and similarly, “the relative strength of an individual’s identification with and involvement in a particular organisation” also has a significant effect on retention, as it increases employee trust and loyalty (Sutherland, 2004: 27). Research has shown that individuals with low organisational commitment are waiting for “the first good opportunity to leave their jobs”, and therefore low organisational commitment is directly linked to turnover and retention (Sutherland, 2004: 27).

It has been said that individuals often leave organisations for reasons unrelated to their jobs, and in many cases unexpected events or shocks are the causes (Terence *et al.*, 1993: 96). This in turn has aided the identification of eight key staff retention factors, adapted from the works of Nompula (2007) and Riggs and Rantz (2001), and include: hard organisational factors; soft organisational factors; relational factors; leadership factors; economic factors; individual factors; personal development factors; and job factors (Amos *et al.*, 2008: 174). Hard organisational factors describe structural characteristics (Homburg, Fassnacht and Guenther, 2000: 2), for example, flat or hierarchical organisational structures and low or high levels of bureaucracy; various policies within the organisation; and systems and processes, for example, efficient and user-friendly information systems (Amos *et al.*, 2008: 174-175; Homburg *et al.*, 2000: 15). Soft organisational factors refer to non-structural organisational characteristics such as human resource management, for example, open, two-way communication; shared values; organisational culture and employees’ behaviours (Amos *et al.*, 2008: 174-175; Homburg *et al.*, 2000: 2). Relational factors refer to relationships both within and outside the organisation, for example, with leaders, supervisors and fellow employees; and with external stakeholders such as suppliers, customers and other organisations (Amos *et al.*, 2008: 174-175). Leadership factors help individuals to learn, for example, by providing effective leadership and supervision; as well as expand their skills and abilities within their particular job (Amos *et al.*, 2008: 174-175; Gappa, Austin and Trice, 2007: 303). Economic factors are particularly important and refer to remuneration and benefits, such as performance-related pay; as well as indirect compensation (Amos *et al.*, 2008: 174-185; Nompula, 2007: 82). Individual factors refer to the unique characteristics of the employee concerned, and include aspects such as, the importance of work relative to other aspects in employees’ lives; and personal circumstances (Amos *et al.*, 2008: 174-175). Personal development factors relate to work with opportunities for learning and creativity; and recognition and feedback about one’s work which in turn leads to personal growth and possible career advancement (Amos *et al.*, 2008: 174; Gappa *et al.*, 2007: 122). Lastly, job factors relate to the nature of the work the employee performs, for example, challenging

work; clear job expectations; and the availability of new technology and systems to do the work (Amos *et al.*, 2008: 174).

Research by Nompula (2007) includes factors that led to the retention of knowledge workers in the energy industry. Included in these were: hard organisational factors; soft organisational factors; relational factors; leadership factors; economic factors; individual factors; personal development factors; and job factors. From these factors the most relevant and irrelevant indicators of retention could be identified and examined. In terms of the most relevant indicators, the quality of leadership and the relationship with managers turned out to be the most relevant in decreasing labour turnover. Equal to this was the opportunity to achieve personal and professional goals, as well as the opportunity to innovate and improve systems (Nompula, 2007: 71). This research thus indicates that the top-ranking indicators come from the leadership, personal development and hard organisational factors. Alternatively, the least relevant factors were the opportunity to work in a foreign country and exchange programmes with other regulators (Nompula, 2007: 84). This demonstrates that knowledge workers are not interested in moving away for their current position for the mere reason of experiencing another job.

Sutherland and Jordaan (2004) carried out a similar study in order to discover the most important variables and underlying factors affecting the retention cognitions of knowledge workers. Included in this research was an investigation to discover how knowledge workers could be segmented into different groupings with regard to their retention cognitions. Sutherland and Jordaan (2004) showed very similar results to that of Nompula (2007) with the most important factors including the lack of challenging work and the level of trust the employee has in the management of the organisation. Both sets of research found that the fundamental needs of knowledge workers include: independence; individualism; and personal achievement. Kinnear (1999) agrees that strategies for retention of labour should be based on freedom to act, recognition, development opportunities and access to the leading technology.

The factors that are most irrelevant when considering retention are also particularly similar between the two studies. Emigration intentions were the lowest indicator in both studies, which indicates that knowledge workers are not retained due to factors relating largely to personal comfort (Sutherland and Jordaan, 2004: 60).

The research topics mentioned above looked into the drivers of mobility among knowledge workers in general, but for the sake of this research, academic staff are of greater

importance. Research of this nature has not been conducted at the particular tertiary education institution, but there has been a similar study carried out by Tettey (2006) concerning the retention of academic staff at African universities. Tettey (2006: 1) states that the intention of the study was to “identify mechanisms for university staff retention that are feasible in Africa under currently severe financial constraints, and to gauge their effectiveness in offsetting the risk of staff loss commonly associated with capacity building efforts in Africa”. Although the study done by Tettey (2006) investigated the whole of Africa, the research carried out on the University of Kwazulu Natal (UKZN) is of particular relevance to this section. Factors that were examined included: workload, research, professional development, and recognition and reward. One particular question that was asked was whether the UKZN staff members had thought about leaving the institution in the past two years. The average result from this was that approximately seventy three percent of the staff from the different faculties agreed that they had thought about leaving (Tettey, 2006: 25-26). Conversely, the number of staff that had actually looked for jobs, or received job offers, was negligible. This shows that the staff members believe they have selected the correct career and will more than likely continue in it (Tettey, 2006: 26).

The workload factor was determined by the sizes of classes at the university and here there was a general agreement that the classes were overloaded. This has led to an increase in the amount of time that an academic must spend marking scripts. This is not seen as an effect on the economic incentives that the academic is receiving, but rather the time and pressure that has been added to their duties. Academics even suggested that the workload had driven them to depression which is a major health concern (Tettey, 2006: 31).

Research was another concern that was, to an extent, related to workload and the respondents were divided on whether the research expectations were reasonable or not. A few of the reasons given were that the teaching workloads were too strenuous and that the research facilities were not of sufficient standard. UKZN has attempted to improve this by improving the research facilities and integrating teaching and research excellence award programmes (Tettey, 2006: 34). Another major problem that was faced was the sufficient recognition and reward for academic achievements. The majority of the academics were in agreement that they are not receiving the correct remuneration for the work that they are undertaking. Academics felt that the organisation is extremely bureaucratic in nature and that the requirements for promotion were set at an unfair level (Tettey, 2006: 28).

RESEARCH METHODOLOGY

Population

The population of the study consists of all academic staff employed at this particular institution. The population of academic staff members was drawn from all six faculties within this particular institution, being: Commerce, Education, Humanities, Law, Pharmacy and Science. These six faculties are comprised of a sum total of forty-three departments encompassing approximately four hundred academic staff members.

Sampling

The type of sampling that was used is known as census sampling, where the study population equals the study sample (Encyclo, 2009). The reason for use of this type of sampling was because of the relatively small size of the tertiary education institution, and as such the study aimed to gain the optimal number of responses from all academic staff employed by the university.

Questionnaire construction

For the purpose of this research, an existing staff retention survey was modified by grouping the forty close-ended statements according to eight key staff retention factors. The factors were adapted from the works of Nompula (2007) and Riggs and Rantz (2001) being: hard organisational factors (HOF); soft organisational factors (SOF); relational factors (RF); leadership factors (LF); economic factors (EF); individual factors (IF); personal development factors (PDF); and job factors (JF). The survey consisted of forty survey statements (five close-ended statements for each of the eight staff retention factors) which had been randomly arranged in order.

Five-point Likert scales were used to determine the relative degree of importance for each survey statement, and ranged from: no influence (1); little influence (2); neutral (3); significant influence (4); to highly significant influence (5). If a respondent chose no influence, the staff retention factor for that specific statement did not influence his/her decision to remain employed at the university. This allowed for the identification of the key factors contributing to academic retention at this particular institution.

The survey also contained a biographical information section which included details such as age; gender; highest qualification obtained; current job position; faculty; number of years in academia and years at this particular institution. This enabled the generation of comparisons among respondents making use of selected biographical characteristics.

Each survey was preceded by a cover letter which communicated the nature and purpose of the study, being to identify the factors that influence the retention of academics at a

particular tertiary education institution. It also assured respondents that their identities would remain anonymous and that the raw data would only be made available to the researchers. The response time period was also expressed, as well as the researchers' contact details.

A pilot study was made use of so as to improve the quality and efficiency of the questionnaire.

Data-gathering procedure

E-mails were sent to departmental secretaries who were requested to forward the e-mail to all academic staff members within their particular department. The e-mail informed the academics of the purpose of the study, confidentiality issues, as well as instructions on how they could go about completing the survey. Willing participants could complete the survey by clicking on the specified link within the e-mail, and this would automatically take them to the survey, containing the cover letter and survey with sections A and B, section A being the biographical details section and B being the survey statements.

Though this institution's Internet server requires that all users log in their personal details when making use of the intranet, the survey existed within a blank 'URL' address, so as to ensure confidentiality. Thereafter the data captured was exported directly to the Microsoft Excel software package to await data analysis.

Limitations

The limitations of this research included the inaccurate replication of the biographical questions online, as given in the hard copy format. This resulted in two of the biographical questions being ambiguous. The questions included: 'years in academia' whereby some people included their years of studies pertaining to academics, while others only included their years as an academic staff member. The second ambiguous question was that of 'the number of years at this particular institution. Some individuals included their years of study at the university, whilst others included their years of employment at the institution. This gave inaccurate results and as such the questions were eliminated from the analysis.

RESULTS AND DISCUSSION

One hundred respondents completed the questionnaire and as such, the percentages indicated in the results below, correspond to the number of respondents, as all questions were compulsory. The ages of the respondents ranged from 24 to 69, with a mean age of 44.36. The majority of respondents were between the ages of thirty-one and fifty, comprising sixty-five percent (65%) of the sample. Twenty-seven percent (27%) of the sample were fifty

years and older, whilst the remaining eight percent (8%) of respondents were thirty years and younger.

Sixty-four percent (64%) of respondents were male, whilst the remaining thirty-six percent (36%) were female. In addition to this, the sample was made up of respondents having various levels of qualifications. Six percent (6%) of respondents were in possession of diplomas, three percent (3%) had obtained a Bachelors degree, fourteen percent (14%) had an Honours qualification, thirty-eight percent (38%) had a Masters degree and the remaining thirty nine percent (39%) had a PhD.

The most common job position amongst the respondents was that of Lecturers, comprising thirty percent (30%) of the sample. The remaining share of participants included Senior Lecturers (18%), Junior Lecturers (15%), Professors (12%), Associate Professors (11%), Heads of Department (7%) and Academic Researchers (7%).

The majority of respondents represented the Humanities faculty, making up thirty-seven percent (37%) of the sample. The remaining sixty-three percent (63%) was divided amongst the Science, Commerce, Pharmacy, Education and Law faculties representing twenty-seven percent (27%), eighteen percent (8%), nine percent (9%), seven percent (7%) and two percent (2%) respectively.

Research question 1: What are the most relevant and irrelevant factors that affect the retention of academics at this particular institution?

Table 1 shows, in descending order, the factors the respondents rated as the most relevant in determining staff retention at this particular institution. The table represents the mean score of the factor as a whole, based on the five individual statements for each staff retention factor. The mean scores are thus represented as a number out of a possible twenty-five, as the five statements were undertaken using a five-point Likert scale. The eight different factors produced similar mean scores with the top three consisting of hard organisational factors, individual factors and leadership factors. On the other hand, the most irrelevant factors were economic factors, personal development factors and relational factors.

TABLE 1: THE MOST RELEVANT AND IRRELEVANT FACTORS AFFECTING RETENTION

Mean Scores of the Factors		
Rank	Factor	Mean Score of Each Factor

1	HOF - hard organisational factors	18.98
2	IF - individual factors	18.93
3	LF - leadership factors	18.40
4	SOF - soft organisational factors	18.16
5	JF - job factors	18.16
6	RF - relational factors	17.86
7	PDF - personal development factors	17.36
8	EF - economic factors	16.92

Table 2 shows the individual statements that are most relevant to academics in terms of their retention and willingness to stay at the institution. The top ten individual statements from the top three most relevant factors were taken into account, and then ranked according to their mean across the one hundred participants' answers. The results showed significant similarity to those that were found by both Nompula (2007) and Sutherland and Jordaan (2004). There are however slight differences as both of the previous studies were undertaken on knowledge workers that have a specific profession in a given industry, rather than on academics of a university. In the areas where a difference can be seen between these particular studies, Tetey (2006) has found relatively similar results to this study.

In a similar result to this study along with hard organisational factors and individual factors, Tetey (2006) agrees that academics have a need to move away from bureaucracy and centralised decision-making to a more open system that supports change and achievement. The responses are consistent with those of Drucker (1994) and Kinnear (1999) stating that the knowledge age is concerned with individualism, which concerns the freedom to plan and act. If these requirements are not met, the retention of staff will become exceedingly more difficult.

TABLE 2: THE TOP TEN INDIVIDUAL STATEMENTS FROM THE THREE MOST RELEVANT FACTORS

Mean Scores of the Most Relevant Individual Statements		
Rank	Individual Statements	Mean Score
1	Freedom to plan and execute work independently	4.51
2	Scope to balance work and life pursuits	4.35
3	Quality of leadership and relationships with H.o.D. and other staff	4.24
4	Freedom and autonomy to assume more responsibility on work assignments	4.02
5	Sense of achievement (individual achievements recognised)	4.02

6	Freedom from bureaucracy	4.01
7	Management that values individuals' contributions and fully utilises their skills	3.89
8	Supportive environment that recognises individual needs	3.81
9	Participative decision-making by H.o.D.	3.66
10	Opportunity to innovate and improve systems	3.58

Table 3 illustrates the least relevant individual statements from the bottom three factors shown in Table 1. The bottom ten are ranked in descending order, in accordance to the participants' responses from the five-point Likert scale used in the survey. These are the statements that academics do not view as relevant in terms of retention.

The results are substantially different to those seen in other research that has been conducted in the field. In the studies carried out by Nompula (2007) and Sutherland and Jordaan (2004), economic and personal development factors featured high in terms of their importance towards retention. This study on the other hand, has found that these are two of the weakest factors.

TABLE 3: THE BOTTOM TEN INDIVIDUAL STATEMENTS FROM THE THREE MOST IRRELEVANT FACTORS

Mean Scores of the Least Relevant Individual Statements		
Rank	Individual Statements	Mean Score
10	Size and structure of remuneration package	3.60
9	Recognition of special contributions	3.56
8	Sufficient benefits and reward packages	3.52
7	Premium remuneration for specialist skills and knowledge	3.39
6	Coaching and mentoring (skills transfer is easily facilitated)	3.33
5	Opportunities for rotation of roles to gain new skills and knowledge	3.31
4	Indirect compensation (eg. car allowance, medical aid and pension fund)	3.29
3	Offer to work elsewhere for a higher remuneration package	3.12
2	Opportunity to achieve personal and professional goals	3.12
1	Partnerships with other organisation (eg. universities and training institutions)	3.07

Research question 2: Is there a significant difference in the average factor score (for each factor) between males and females?

H_0 = (for each factor) the mean for males is equal to the mean for females.

H_1 = (for each factor) the mean for males is significantly different to the mean for females.

For each of the factors t-tests were conducted to test if the average factor scores were significantly different between males and females. T-tests with pooled estimates of the variance were conducted as the variances between males and females were not significantly different.

As can be seen in Table 4 below, all but one of the factors had a p-value greater than alpha (0.05), meaning that we fail to reject the null hypothesis (H_0). Therefore, these data do not provide sufficient evidence that there is a significant difference in average factor scores between males and females for each of the following factors: hard organisational factors; soft organisational factors; relational factors; leadership factors; individual factors; personal development factors; and job factors. However, economic factors had a p-value of 0.0187, which is less than alpha (0.05), meaning that we reject the null hypothesis (H_0) and can therefore conclude that these data do provide sufficient evidence to show that there is a significant difference in average factor scores between males and females, regarding economic factors.

The difference in opinion with regards to economic factors, between males and females is concerned with remuneration packages, benefits, premiums paid for specialist skills and knowledge, and indirect compensation. A possible reason behind this is that most women encounter a more conflicting work-life balance than men, due to the responsibilities of family life and pursuance of a career placed on them (Rockler-Gladen, 2007), and thus the importance of economic factors would greatly depend on each individual female's work-life balance belief. Gappa *et al.* (2007: 76) further state that "given the additional challenges that many women face in the probationary period, it is not surprising that women in full-time faculty positions are less satisfied than men with their workloads, salaries, opportunities for advancement, and job security".

TABLE 4: T-TEST ANALYSIS

Staff retention factor	Valid N - Male	Valid N - Female	Mean - Male	Mean - Female	Std. Dev. - Male	Std. Dev. - Female	t-value	df	p-value
HOF	64	36	18.84	19.22	3.06	2.99	-0.60	98	0.5508
SOF	64	36	17.78	18.83	3.60	3.48	-1.42	98	0.1585
RF	64	36	17.52	18.47	3.28	3.32	-1.39	98	0.1664
LF	64	36	17.91	19.28	4.02	3.75	-1.68	98	0.0970
EF	64	36	16.02	18.53	5.30	4.55	-2.39	98	0.0187
IF	64	36	18.81	19.14	2.97	3.08	-0.52	98	0.6039
PDF	64	36	17.09	17.83	3.39	2.91	-1.10	98	0.2740
JF	64	36	17.94	18.56	3.52	3.71	-0.83	98	0.4105

Research question 3: Are there significant differences in the average staff retention factor (for each factor) between the various age groups; the highest qualification obtained; the current job position; and the faculties?

H_0 = (for each factor) the average staff retention factors are not significantly different between the various age groups.

H_1 = (for each factor) the average staff retention factors are significantly different between the various age groups.

For each factor, a one-way analysis of variance (ANOVA) test was used to determine whether significant differences for each of the average staff retention factors existed, between: the various age groups; the highest qualifications obtained; the current job positions; and the different faculties. These tests are used when there are more than two variables being tested.

The results from the eight separate ANOVA tests can be found in Table 5 below. It can be clearly seen that all but one of the staff retention factors have p-values greater than alpha (0.05), meaning that we fail to reject the null hypothesis (H_0). These data do not provide sufficient evidence to conclude that differences exist between the various age groups and the average of each of the staff retention factors. However, for job factors the p-value (0.0380) was less than alpha (0.05), meaning that we reject the null hypothesis (H_0). These data do provide sufficient evidence to conclude that this factor, namely JF, does have an effect on the response, and hence differences in average employee retention scores exist between the various age groups.

The difference in opinion with regards to job factors, between the various age groups is concerned with the work environment (availability of technology, equipment and resources), a balanced workload and work assignments, as well as job enrichment, rotation and enlargement. A possible reason behind this is younger adults' high regard and increased reliance on information technology, particularly within the workplace. This is because 'computer literacy' has become a major determinant of employability for many jobs (Westerman and Davies, 2000: 478). Furthermore, younger adults have better use of technology, which results in "speed of task performance, coupled with a tendency toward greater accuracy" (Westerman and Davies, 2000: 478), and as such younger academics would tend to regard these factors as more important.

Also, with today's modern, fast-paced and rapidly changing environment, it is important for younger employees to be able to adapt to changes, for example, in the workplace, and in their jobs. Therefore, younger academics would tend to regard job factors pertaining to these aspects as more important, and de la Bellacasa (2002: 7) further states that "today, aptitude to survival depends on individual adaptability, flexibility and mobility: be innovative, autonomous, polyvalent, multifunctional and never stop learning in order to seduce your successive employers".

TABLE 5: INDIVIDUAL ANALYSIS OF VARIANCE TESTS FOR THE VARIOUS AGE GROUPS

Staff retention factor	F	df - Effect	df - Error	p-value
HOF	0.19	2	97	0.8271
SOF	0.77	2	97	0.4662
RF	0.86	2	97	0.4251
LF	1.03	2	97	0.3625
EF	1.66	2	97	0.1946
IF	0.81	2	97	0.4483
PDF	0.71	2	97	0.4939
JF	3.38	2	97	0.0380

H_0 = (for each factor) the average staff retention factors are not significantly different between the highest qualifications obtained.

H_1 = (for each factor) the average staff retention factors are significantly different between the highest qualifications obtained.

The results from Table 6 on the following page show that all of the staff retention factors have p-values greater than alpha (0.05), meaning that we fail to reject the null hypothesis (H_0). These data do not provide sufficient evidence to conclude that for each of the staff retention factors, differences in average employee retention scores exist between the different qualifications obtained. All of these factors do not have any effect on the responses.

TABLE 6: ANALYSIS OF VARIANCE TEST FOR THE HIGHEST QUALIFICATIONS OBTAINED

Staff retention factor	F	df – Effect	df - Error	p-value
HOF	0.88	4	95	0.4775
SOF	0.07	4	95	0.9908
RF	1.28	4	95	0.2823
LF	0.13	4	95	0.9705
EF	1.18	4	95	0.3242
IF	0.35	4	95	0.8442
PDF	0.91	4	95	0.4621
JF	1.30	4	95	0.2742

H_0 = (for each factor) the average staff retention factors are not significantly different between the current job positions.

H_1 = (for each factor) the average staff retention factors are significantly different between the current job positions.

The results from Table 7 below show that all of the staff retention factors have p-values greater than alpha (0.05), meaning that we fail to reject the null hypothesis (H_0). These data do not provide sufficient evidence to conclude that for each of the staff retention factors, differences in average employee retention scores opinion exist between the different job positions. All of these factors do not have any effect on the responses.

TABLE 7: ANALYSIS OF VARIANCE TEST FOR THE CURRENT JOB POSITIONS

Staff retention factor	F	df – Effect	df - Error	p-value
HOF	0.32	6	93	0.9250
SOF	0.72	6	93	0.6318
RF	0.53	6	93	0.7858

LF	0.55	6	93	0.7692
EF	1.23	6	93	0.2959
IF	1.11	6	93	0.3627
PDF	1.60	6	93	0.1554
JF	0.93	6	93	0.4763

H_0 = (for each factor) the average staff retention factors are not significantly different between the different faculties.

H_1 = (for each factor) the average staff retention factors are significantly different between the different faculties.

The results from Table 8 below show that all of the staff retention factors have p-values greater than alpha (0.05), meaning that we fail to reject the null hypothesis (H_0). These data do not provide sufficient evidence to conclude that for each of the staff retention factors, differences in average employee retention scores exist between the different faculties. All of these factors do not have any effect on the responses.

TABLE 8: ANALYSIS OF VARIANCE TEST FOR THE FACULTIES

Staff retention factor	F	df – Effect	df - Error	p-value
HOF	0.60	5	94	0.7002
SOF	0.82	5	94	0.5404
RF	0.73	5	94	0.5996
LF	0.45	5	94	0.8087
EF	0.74	5	94	0.5948
IF	0.28	5	94	0.9240
PDF	0.31	5	94	0.9080
JF	0.39	5	94	0.8521

Cronbach’s alpha reliability co-efficient

The Cronbach’s alpha co-efficient was used to determine the internal consistency or reliability of the eight staff retention factors used in the study. According to Sekaran (2003: 205) “the Cronbach’s alpha reliability co-efficient values range from zero to one, and the closer the value is to one, the greater the internal consistency or reliability of the measuring instrument is. Cronbach’s alpha reliability co-efficient values of less than 0.6 are considered poor, those between 0.6-0.7 are considered acceptable, and those greater than 0.8 are

considered good”. Table 9 below indicates the Cronbach’s alpha reliability co-efficient for each of the eight staff retention factors.

TABLE 9: THE CRONBACH’S ALPHA RELIABILITY CO-EFFICIENT FOR EACH STAFF RETENTION FACTOR

Staff retention factors	Cronbach’s alpha
HOF	0.53
SOF	0.73
RF	0.57
LF	0.80
EF	0.88
IF	0.52
PDF	0.57
JF	0.68

Hard organisational factors and relational factors both had a Cronbach’s alpha denoting a poor level of reliability, while leadership factors had a Cronbach’s alpha of 0.80 denoting a good level of reliability, and job factors, a Cronbach’s alpha of 0.68 representing an acceptable level of reliability. Furthermore, removal of any of the five close-ended statements pertaining specifically to each of these four staff retention factors would not achieve greater levels of reliability.

For soft organisational factors, the Cronbach’s alpha was equal to 0.73 denoting an acceptable level of reliability, and removal of statement 26, “socially-supportive environment that recognises social needs”, would result in a marginally greater level of reliability (0.74) yet this would still only be considered acceptable. For economic factors, the Cronbach’s alpha was equal to 0.88 denoting a good level of reliability, and removal of statement 37, “indirect compensation (eg. car allowance, medical aid and pension fund)” would result in a marginally greater level of reliability (0.89). For individual factors, the Cronbach’s alpha was equal to 0.52 denoting a poor level of reliability, and removal of statement 6, “scope to balance work and life pursuits”, would result in a better level of reliability (0.54) yet this would still only be considered poor. However, removal of statement 14, “personal circumstances (eg. access to well-renowned schools in Grahamstown)”, would increase the level of reliability to an acceptable level (0.60). For personal development factors, the Cronbach’s alpha was equal to 0.57 denoting a poor level of reliability, and removal of statement 7,

“opportunity to achieve personal and professional goals”, would result in a far greater, acceptable level of reliability (0.68).

Overall, the reliability of the measuring instrument appears to be poor. However, this is better and more reliable in comparison to the measuring instrument used by Sutherland and Jordaan (2004), whose seven-factor research instrument achieved three acceptable and four poor Cronbach’s alphas. Also, the measuring instrument used by Nompula (2007) was an adaptation of the Schriesheim and Tsui’s Job Satisfaction Index, yet the research failed to include an analysis of reliability. Therefore, it must be noted that potential new researchers would need to modify the instrument used in this research, to achieve a greater level of reliability, should they choose to make use of it in the future.

RECOMMENDATIONS

The data from this sample shows the most relevant indicators of retention in terms of academics, and it is therefore imperative to improve the systems that staff find most important. The retention of academics is different to any other industry as we have seen from the results. Academics are more interested in the structural characteristics as they prefer a more relaxed hierarchical layout of the organisation (Amos *et al.*, 2008: 174-175).

Other aspects that are important to take into consideration are the academics themselves. They are not as interested in the economic benefits and personal development factors, as in many cases they have achieved this in their previous careers. The organisation must rather give them the freedom to take control and build on their personal lives and expand on their skills within the particular job (Amos *et al.*, 2008: 174-175).

With regards to the difference in opinion concerning economic factors, a possible recommendation is for this particular institution to provide its female academics with support activities to help them better manage their work-life balances. The university does however, have its own day care centre whose mission is to provide quality and affordable care for the families of staff and students of the university. Perhaps a greater focus on staff alone, academic staff in particular, is needed, for example, if each department or faculty had its own childcare support centres, though this would require a larger budgetary allocation by either the staff in their own private capacity, or the university itself.

With regards to the difference in opinion concerning job factors, a possible recommendation is for this particular institution to place a greater emphasis on the use of technology, through the implementation of training programmes, which will help to bridge the gap in performance

and accuracy between younger and older academic staff. Sutherland and Jordaan (2004: 63) reiterate that knowledge workers need to create and secure their own futures by continuously developing their employability, through further education and the development of new, labour-market related competencies, such as those pertaining to information technology.

Another recommendation pertaining to job factors, is to “ensure the continual transfer and encoding of knowledge” (Sutherland and Jordaan, 2004: 63) so that in the event of an academic leaving, their knowledge would be retained within the institution. This in turn, would also help fellow academics to adapt to changing circumstances within the workplace and their jobs.

The results of this research have shown that no differences in opinion concerning each of the staff retention factors exist, between the highest qualifications obtained; the current job positions; and the faculties. This therefore shows that all academic staff tend to think alike in terms of what keeps them employed at this particular institution, and the university should therefore not make any amendments to its current retention strategies and policies based on these biographical characteristics.

CONCLUSION

The attraction and retention of academic staff remains a chief problem, and as such there is an urgent need for higher education institutions to retain their most talented academic staff members. In light of this, though academic staff members find a career in academia both attractive and satisfying, they also cite sources of dissatisfaction, stress and a willingness to change jobs (Gappa *et al.*, 2007: 114). It is therefore essential that higher education institutions take cognisance of this, and do all that they can to not only attract but also retain these highly sought-after employees. This can be achieved by offering academics opportunities for advancement; a wide range of attractive work options; and rewards based on individual performance (Gappa *et al.*, 2007: 124; Sutherland and Jordaan, 2004: 63). Increasing educational costs have also made it difficult for higher education institutions to keep up with salaries offered in competing professions (Gappa *et al.*, 2007: 107-108). It is therefore important to offer academics work environments that take their needs and interests into account (Gappa *et al.*, 2007: 124), in order to keep them satisfied and retained within the organisation, and contributing to today’s modern knowledge-based economy (Sutherland and Jordaan, 2004: 63). This is because the market for academic staff “will remain competitive, both among institutions of higher education and with other occupations or organisations” (Gappa *et al.*, 2007: 114).

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IMPROVING THE FINANCIAL EFFICIENCY OF PENSION FUNDS IN KENYA

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Competitive paper

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ABSTRACT

Pension funds are the principal sources of retirement income for millions of people in the world. They are also important contributors to the GDPs of countries and a significant source of capital in financial markets.

The financial efficiency of Kenyan pension funds, both public and private, has however come under increased scrutiny. Research on ways to improve the efficiency of pension funds in Kenya is therefore of great importance.

The sample consists of 362 pension funds drawn from the Kenyan RBA register. The empirical results show that pension fund governance, leadership and regulations do not influence the financial efficiency of these funds. The results however reveal that fund size is the most important determinant of financial efficiency of the pension funds investigated in this study.

INTRODUCTION

Pension funds are the principal sources of retirement income for millions of people in the world (Sze 2008). They are also important contributors to the GDPs of countries and a

significant source of capital in financial markets (Omondi 2008). A global pension crisis has however emerged in the past two years owing to depressed financial markets. This has eroded funds to cater for the retirement income of the ageing populations (OECD 2008). It is therefore important that pension funds be managed effectively. The present study investigates the critical success factors of the financial efficiency of pension funds. The study was conducted in Kenya and it is hoped that lessons for the pension fund industry worldwide will emerge from this study.

There were 1679 pension funds in Kenya by the close of 2007, of which 130 funds were in the public sector, 16 were individual retirement schemes and the rest had been established by private enterprises. The financial efficiency of pension funds, both public and private, has however come under increased scrutiny. It has been reported that, of the 130 plans in the public sector, 69 are grossly under-funded and need urgent measures to revitalise them (Daily Nation 2006). Research on ways to improve the efficiency of pension funds in Kenya is therefore of great importance.

PROBLEM STATEMENT

Most people depend on their pension funds as a source of income when they retire. Retirement income accounts for 68% of the total income of retirees in Kenya (Kakwani, Sun and Hinz 2006), 45% in Australia, 44% in Austria and 80% in France, while in South Africa 75% of the elderly population rely on pension income (Alliance Global Investors 2007). In the United States of America 82% of retirees depend on pension income (EBRI 2007a). Pension funds should therefore be managed efficiently to ensure higher retirement income for pensioners.

Global indices indicate that pension assets are important to any economy. According to Alliance Global Investors (2007), pension assets in Australia amount to AU\$ 1trillion (equivalent to 20% of the GDP), while in Belgium pension assets amounted to 140 billion Euro in 2004. In Kenya and South Africa, respectively, the pension assets had a value of KSH 130 billion in 2006, which accounted for 30% of the GDP (RBA Quarterly Report 2007), and ZAR 1098 billion in 2004 (Alliance Global Investors 2007). Pension funds are therefore important contributors to the GDPs of countries and should consequently be managed effectively.

The pension fund industry is a significant source of capital in the Kenyan financial markets (Omondi 2008). Pension funds invested a sum of Ksh. 223 billion in the Kenyan financial

sector in 2007 of which Ksh. 77 billion (22% of the outstanding domestic debt) was invested in government securities (Omondi 2008). Pension funds are thus significant institutional investors and must therefore be managed efficiently.

The empirical literature however suggests that there are certain research gaps regarding the efficiency of pension funds. These research gaps relate to computation of efficiency, governance, investment strategy and pension fund size.

Studies on the performance of pension funds either use financial ratio analysis (Dulebohn 1995) or compare the pension fund returns with the market indices (Stanko 2002; Bikker and Dreu 2009). The use of Data Envelopment Analysis (DEA) has been documented as a more superior technique for the analysis of efficiency (Cinca, Mal Morinero and Garcia 2002; Barros and Garcia 2006) since it permits the ranking of the institutions being evaluated and generates scores for inefficiencies. Very few studies have used DEA to measure pension fund efficiency. The present study seeks to quantify the efficiency of pension funds using DEA analysis.

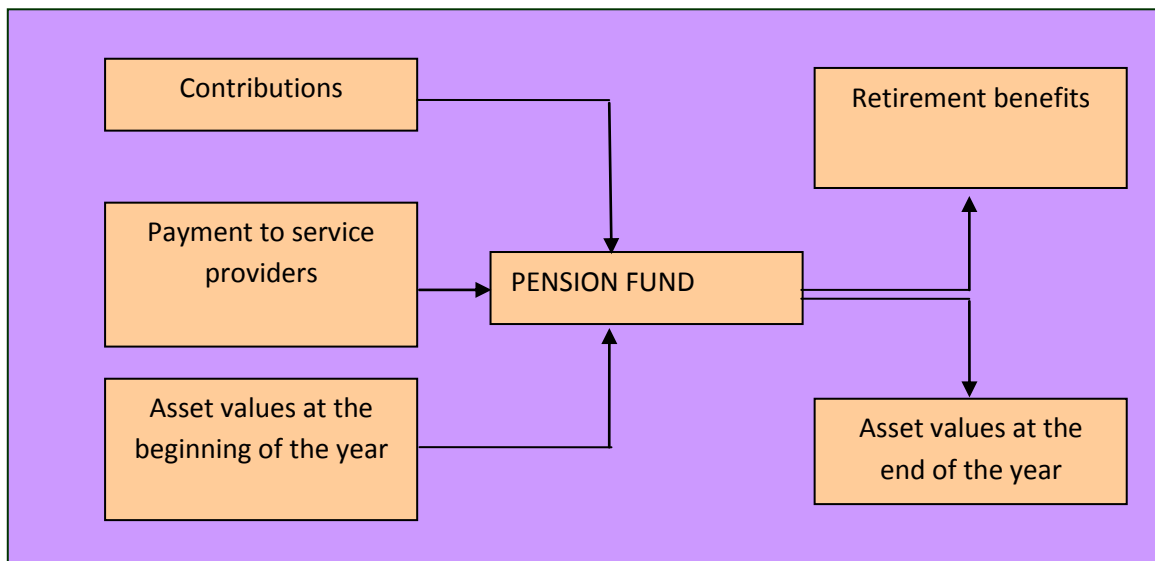
Although corporate governance has attracted much attention in the recent past, focus has not shifted to pension fund governance and the credibility of the pension systems as important determinants of pension funds (Besley and Prat 2005; Carmichael and Palacios 2003; Ambatchsheer 2001). Furthermore, different authors (Asebedo and Grable 2004; Markese, 2000; Stanko, 2002) relate the investment strategy to the mix that an investor makes in the investment portfolio. A research gap has been identified as the empirical literature does not relate the investment strategy to efficiency. The present study investigates the appropriate investment strategy to maximise financial efficiency.

The literature on the relationship between size and efficiency reveals mixed findings. Studies that report on the absence of such a relationship include Cicotello and Grant (1996), Droms and Walker (2001) and Grinblatt and Titman (1994). Contradictory results on the same proposition are included in Gallagher and Martin (2005) and Cheong (2007). In terms of risk, Droms and Walker (2001) noted that portfolios of smaller funds are more risky than larger funds but found that smaller funds were outperforming the larger funds. Malhotra and McLeod (2000) found contradicting results on the same issue. The contradictory findings of the empirical studies have left a research gap on the optimum fund size. The present study attempts to determine the influence of fund size on the financial efficiency of pension funds.

A CONCEPTUAL MODEL TO IMPROVE PENSION FUND EFFICIENCY

Pension funds, like many other organisations, can be viewed as open systems which receive inputs, convert these inputs into outputs and deliver these outputs to stakeholders. Pension funds receive inputs (scarce financial resources in the form of contributions and investment funds) and convert these inputs to outputs (pension fund value and retirement benefits) (Davis 2005). A pension fund would be regarded as efficient if it succeeds in maximising financial outputs by the efficient use of the financial resources (inputs) (Chansarn 2005).

FIGURE 1: SYSTEM THEORY VIEW OF PENSION FUNDS

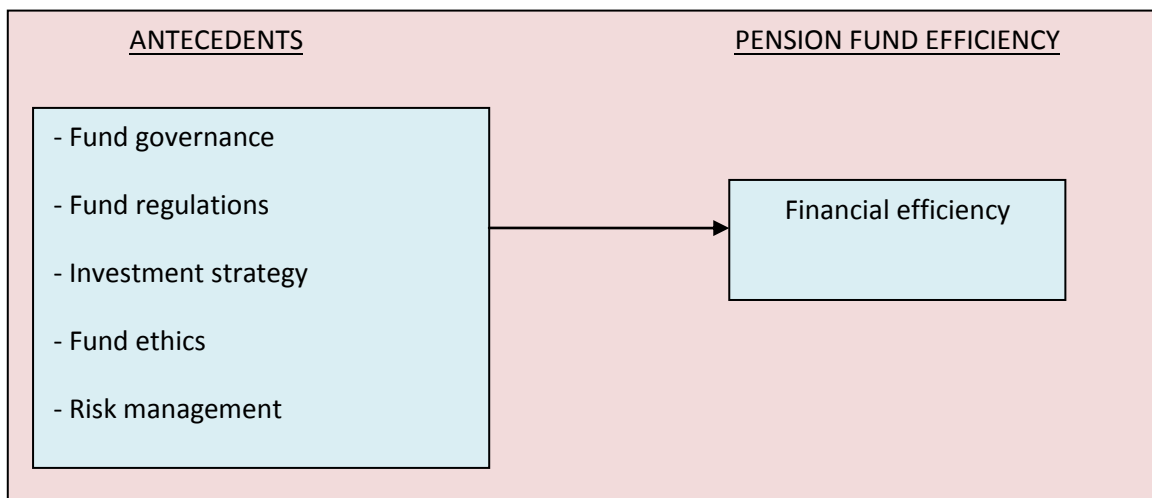


Source: Authors' own construction

In the present study, pension funds are conceptualised as systems that transform financial inputs (asset values at the beginning of a financial year, contributions and payments for inputs) into gains or outputs (retirement benefits and asset values at the end of the financial year) for members. Efficiency is regarded as a function of internal management. An efficient pension fund should operate at the lowest possible cost and maximise its returns on investments and benefits payable to the retirees.

More specifically, the present study conceptualises financial efficiency, using the Data Envelopment Analysis (DEA) approach, as the end result of effective governance, adherence to pension fund regulations, implementation of an effective investment strategy, adhering to fund ethics, managing pension fund risk, choosing the appropriate pension fund design, operational efficiency and managing the age profile of the members as well as the size of the pension fund. This conceptual framework is graphically illustrated in Figure 2.

FIGURE 2: CONCEPTUAL MODEL TO INCREASE FINANCIAL EFFICIENCY



Source: researcher's own construct

Source: Authors' own construct

RESEARCH OBJECTIVES

The primary objective of the study is to investigate ways of enhancing pension fund efficiency by establishing the determinants of such efficiency. More specifically, the study explores the effects that governance, regulations, investment strategy, fund ethics, risk management, design, size and the age profile of members have on the financial efficiency of pension funds.

THE HYPOTHESISED RELATIONSHIPS

The following hypothesised relationships are investigated in the study.

The relationship between pension fund governance and financial efficiency

Pension fund governance has direct implications for pension efficiency as it influences the administrative efficiency and investment strategies of pension fund use (OECD 2009; Carmichael and Palacios 2003; Husted 2008). Pension fund performance is strongly correlated with governance indicators such as cheaper operating costs and the timely payout of benefits (Steele 2006).

It is therefore hypothesised that:

H1: Pension fund governance exerts a positive influence on the financial efficiency of pension funds.

Relationship between fund regulations and financial efficiency

The major reason why many developing countries fail to optimise pension fund efficiency is the existence of many laws to which pension funds are obliged to subscribe (World Bank 2005). The multiplicity of fragmented laws increases compliance costs and reduces the pension benefits (Asher and Nandy 2006). On the other hand, Hu, Stewart and Yermo (2007) reported that, in China, pension regulations on investments and governance resulted in more robust risk control mechanisms, better investor protection, more transparent information disclosure and subsequent stability of the pension funds.

Eijffinger and Shi (2007) attributed the pension crisis in the European Union to regulatory failure. They therefore suggested that pension laws be created in licensing, governance, asset restrictions, financial information disclosures and guarantees. The general view is therefore that pension funds need regulations to ensure they deliver on their pension benefit promises (Blome, Fachinger, Franzen, Scheuenstuhl and Yermo 2007; Odundo 2008).

It is therefore hypothesised that:

H2: Adherence to fund regulations exerts a positive influence on the financial efficiency of pension funds.

Relationship between investment strategy and financial efficiency

The OECD (2009) states that pension funds with a clear statement of investment principles perform better than those without. Increased pension fund returns are dependent on the active management of the investment portfolios (Stanko 2002). Markese (2000), for example, found that pension funds that invest more in equity stocks perform better than those that invest more in bonds and other fixed securities.

According to Asebedo and Grable (2004), investment diversification leads to average performance but minimises losses during periods of poor stock market performance. Through proper investment strategy risk is avoided and timing is enhanced (Hebb 2006). Against this background, it is hypothesised that:

H3: Proper investment strategy exerts a positive influence on the financial efficiency of pension funds.

Relationship between fund ethics and financial efficiency

Failure to abide by the acceptable ethical standards in pension funds results in suboptimal decision-making that compromises their financial results and trust bestowed on them (Clark and Urwin 2007; OECD 2007). Proper ethical behaviour in pension fund management minimises compliance costs and ensures that the risks taken by the trustees are acceptable and within the appropriate thresholds as prescribed in the investment policy, thus improving efficiency (Gifford 2004). Moreover, ethical behaviour in the pension fund industry contributes to the maximisation of the beneficiary's welfare, reduced chances of litigation, improved governance and better investment performance, which increases efficiency (OECD 2009).

It is therefore hypothesised that:

H4: Fund ethics exert a positive influence on the financial efficiency of pension funds.

Relationship risk management and financial efficiency

Pension funds should provide proper risk management to ensure that the retirement income of their members is safeguarded (Davis 2000). To do this, pension funds should have appropriate risk management policies that safeguard the replacement rate, investment safety and time-based risks such as inflation (Davis 2000). According to Galer (2009), risk management by pension funds should link directly to portfolio objectives and should maintain a balance between assets and liabilities in the context of funding, immunisation and the use of derivative securities. There is general agreement that proper risk management results in better financial results for pension funds as it focuses on a proactive approach to losses (Thompson 2008; Brunner, Hinz and Rocha 2008; Odundo 2008).

Against this background it is hypothesised that:

H5: Proper risk management exerts a positive influence on the financial efficiency of pension funds

Relationship between fund design and financial efficiency

Literature sources suggest that defined contribution (DC) pension funds outperform the defined benefit (DB) funds for the following reasons:

- DB funds are more cost effective than DB funds because the benefits payable are not tied to the contributions made (Brady 2009; Crane, Heller and Yakoboski 2008; Faktum 2009);

- They involve members more in decision-making (Hess and Impavido 2003; Choi, Laibson and Madrin 2006);
- the investment risk is borne by the members and not the sponsor so that members take all possible measures to avoid loss (Brady 2009);
- there is less sponsor influence since the sponsor does not nominate the majority of the members (Yang 2005);
- there is more transparency in decision-making and communication to members (Nyce 2005; Clark and Mitchell 2005); and
- default risk from the members is less (Yang 2005).

It is therefore hypothesised that:

H6: Fund design exerts an influence on the financial efficiency of pension funds

Relationship between age of members and the financial efficiency of pension funds

The age of employees determines the pension promises that their employers will make to them since younger employees have a longer time horizon to invest compared with the older employees (Friedberg and Webb 2004; Lusardi and Mitchell 2007), which in turn influences the type of pension fund design on which to anchor the pension fund.

Studies point to a negative relationship between the age of members and pension fund efficiency and found that the age of the members influences the investment strategy to adopt (Charles, McGuinan and Kretlow 2006). Whereas pension funds with younger members will be robust in their investments, while those with older members will tend to be conservative, thus limiting their returns on investments (Charles et al. 2006).

It is therefore hypothesised that:

H7: The age of members exerts a negative influence on the financial efficiency of pension funds

Relationship between fund size and financial efficiency

Empirical findings with regard to the relationship between size and the financial efficiency of pension funds are inconclusive. A negative relationship between financial performance and fund size is reported in Cicotello and Grant (1996), Droms and Walker (2001) and Grinblatt and Titman (1994). On the other hand, a positive relationship between the same variables is reported in Gallagher and Martin (2005).

It is reported that larger pension funds can achieve numerous benefits brought about by economies of scale in administration (Cheong 2007; Mahon and Donohoe 2006; Chon, Hong, Huang and Kubik 2004). Similar findings were reported by Bikker and Dreu (2009) and Ardon (2006).

As more studies indicate a positive relationship between the two variables, it is hypothesised that:

H8: Fund size exerts a positive influence on the financial efficiency of pension funds

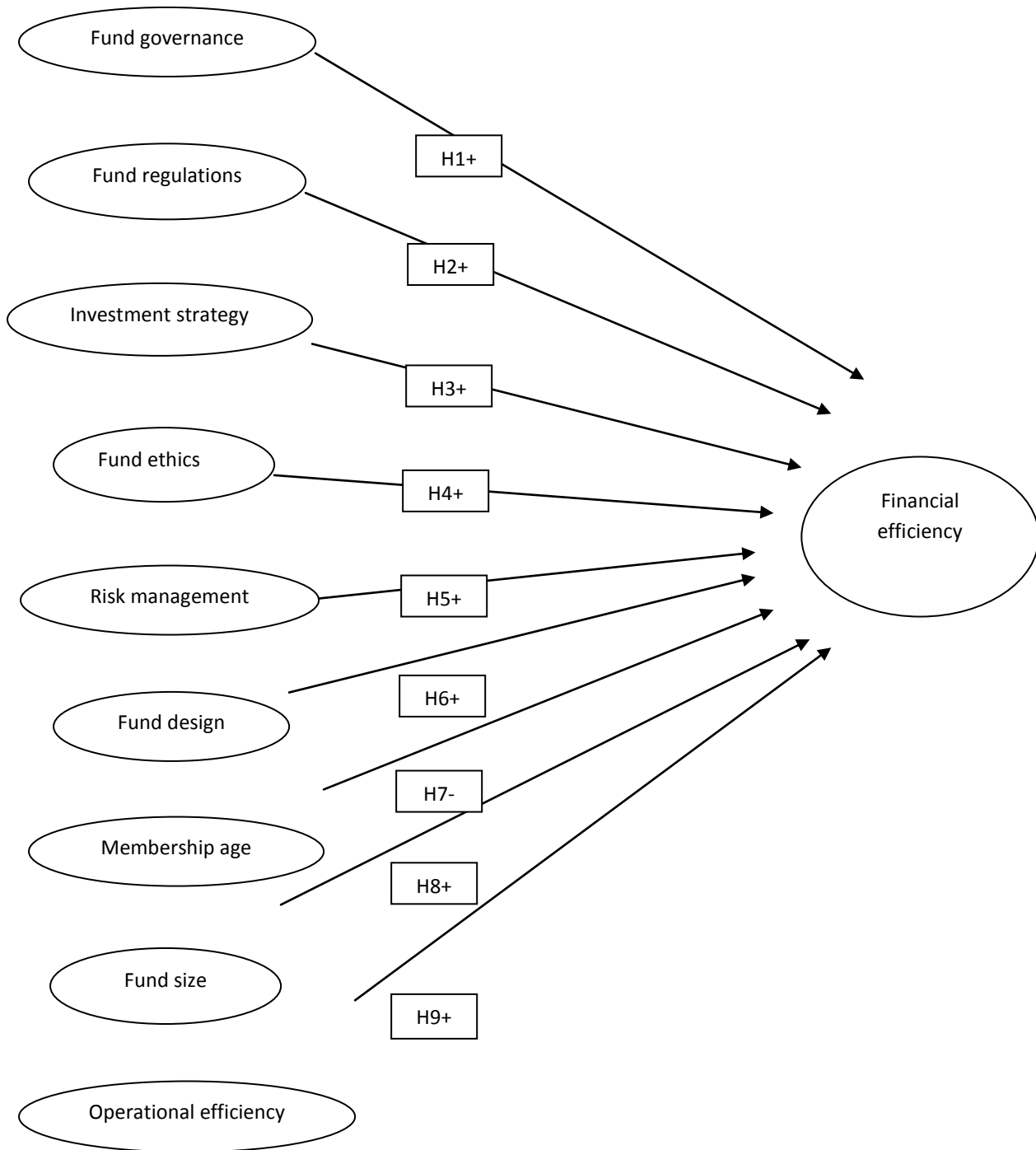
Relationship between operational efficiency and financial efficiency

Operational efficiency aims at combining people, processes and technology to add value to pension fund activities and consequently reduce costs (Harris, 2006). Financial efficiency on the other hand is conceptualised as the financial efficiency brought about by the balance between costs and benefits of operation (Cinca et al. 2002; Barros and Garcia 2006; Serrano and Mar Molinero 2001). It is contemplated that to achieve financial efficiency, organisations must be operationally efficient. This assertion leads to the following hypothesis:

H9: Operational efficiency exerts a positive influence on financial efficiency

The hypothesised model is depicted in Figure 3 below.

FIGURE 3: HYPOTHESISED MODEL TO IMPROVE FINANCI EFFICIENCY



METHODOLOGY OF THE STUDY

The sample

The population from which the sample was drawn consisted of 1679 pension funds in the RBA register by 31 December 2008. Pension funds that were licensed before 2001 were omitted due to a lack of coherent data. This condition narrowed the population of interest

down to 749 pension funds. A questionnaire was sent to one trustee of all the 749 pension funds. Only 362 usable questionnaires were returned, which resulted in a response rate of 48.3%. Trustees form the board of management of a pension fund and are believed to be best informed about pension fund management issues.

The sample comprised 316 trustees (42.2%), 10 chairpersons of the boards of trustees (1.3%), 23 members who were former trustees (3.1%) and 13 trust secretaries (1.7%). The sample size was considered adequate since for the purposes of applying structural equation modelling, the sample size needs to be at least 100 per respondent per model (Hair, Anderson, Tatham and Black 1995: 637).

Table 1 depicts the demographical composition of the sample. Most of the respondents were male (81.8%) and between 30 to 39 years old. Most of the respondents were also middle level managers (96.5%) operating in predominantly defined contribution pension funds (84.5%).

Most of the respondents (87.3%) were normal trustees, while the number of members belonging to a pension fund ranged from 50 to 500. Pension funds in Kenya can thus be described as pension funds operated on defined contribution design with membership ranging from 50 to 500 and members aged between 21 and 50 years.

The measuring instruments

Except for financial efficiency, instruments were developed to measure the variables investigated in the study. It was important to develop instruments that reflect the pension fund environment of Kenya. The instruments included fund ethics, fund governance, risk management, fund regulations and investment strategy.

TABLE 1: DEMOGRAPHIC COMPOSITION OF THE SAMPLE

Variable	n	%
Gender: Male	296	81.8
Female	<u>66</u>	<u>18.2</u>
	362	100.0
Age of respondents:		
20-29 years	17	4.7
30-39	261	72.1
40-49	54	14.9

	50-59	26	7.2
	60 >	<u>4</u>	<u>1.1</u>
		362	100.0
Occupational position:			
	Chairperson	10	2.8
	Member	23	6.4
	Trust secretary	13	3.5
	Trustee	<u>316</u>	<u>87.3</u>
		362	100.0
Occupational level:			
	Top management	13	3.5
	Middle management	349	96.5
	Lower management	<u>0</u>	<u>0.0</u>
		362	100.0
Fund design:			
	Defined contribution	306	84.5
	Defined benefit	<u>56</u>	<u>15.5</u>
		362	100.0
Fund size:			
	<100 members	82	22.7
	101-200	95	26.2
	201-300	72	19.9
	301-400	58	16.0
	401-500	41	11.3
	500>	<u>14</u>	<u>3.9</u>
		362	100.0
Age of members:			
	21-30 years	35	9.7
	31-40	293	80.9
	41-50	19	5.2
	51-60	<u>15</u>	<u>4.1</u>
		362	100.0

The Data Envelopment Analysis (DEA) technique was used to measure financial efficiency. The concept of data envelopment was first developed by Charnes, Cooper and Rhodes (1978) to calculate the relative efficiency of objects (decision-making units) using a variety of inputs and outputs. Charnes et al. (1978:430) conceptualised DEA as the mathematical identification of the most efficient decision-making unit from the observed inputs and outputs.

Efficiency in DEA is thus defined as the ratio of the weighted sum of outputs to the weighted sum of inputs (Sofianopoulou 2006:).

The results of the DEA models produce the efficiency value of every decision-making unit, with the highest value being 100% (Mostafa 2007). The firms with efficiency values of 100% can be classified as efficient and can be role models to those with lesser scores (Mostafa 2007).

A self-constructed instrument used to measure fund ethics captured the extent to which pension funds ensure confidentiality in all pension fund management issues; reject inappropriate requests from sponsors; honestly share information with trustees and members; manage conflict with service providers; and properly utilise trustees' authority. These indicators were also anchored to a five-point scale ranging from (1) strongly disagree to (5) strongly agree.

The fund governance instrument measured, among others, the importance of the following: board of trustees having members in active employment; CEO leadership; continuous finance education to trustees; using competitive bidding in appointing service providers; avoiding conflict of interest in decision-making and maintaining an effective performance management system. The five-point anchoring scale for these indicators ranged from (1) not important at all, to (5) a great deal important.

The risk management instrument captured elements such as, among others, exposure to default risk from the sponsor and employees, the absence of strategies to counter stock market risk, negative influences from industry changes of employees, exposure to high volatility in order to earn higher return on investments and tolerating risk beyond the guidelines of the RBA. These indicators were anchored to a Likert-type scale ranging from (1) strongly disagree to (5) strongly agree.

An instrument was constructed to capture the important fund regulations with which Kenyan pension funds need to comply. The respondents were asked to indicate the importance of these regulations in the governance and regulatory environment of pension funds in Kenya. These regulations, among others, include: compliance cost regulation by the RBA; limiting the number of trustees to 10, regardless of the size of the scheme; the regulation of fees charged by service operators; tax on non-exempt incomes of pension fund members; risk tolerance levels. The five-point anchoring scale for these indicators ranged from (1) not important at all to (5) a great deal important.

The investment strategy instrument measured the elements that generally describe the investment strategies employed by pension funds. These strategies, among others, include: investment committees making investment decisions; not restricting investment in any company; covering trustees with liability insurance; increased investment in fixed interest investments (bonds and treasury bills) as opposed to equity investments; conducting independent evaluations of pension fund performance to confirm rates reported by fund administrators. These indicators were anchored to a five-point scale ranging from (1) strongly disagree to (5) strongly agree.

The operational efficiency instrument was constructed on the basis of the efficiency attributes identified in the literature on pension funds. The instrument measured for example the perceived extent to which pension funds were successful in, among others, reducing administrative costs, reducing benefit processing periods, reducing time taken to report to members, improving internal control systems, maintaining return on investment and complying with RBA regulations. These indicators were anchored to a Likert-type scale ranging from (1) strongly disagree to (5) strongly agree.

The questionnaire also included instruments to capture variables such as fund design, fund size and membership age. The fund design instrument measured what type of design a pension fund has adopted, namely (1) defined contribution (DC), (2) defined benefit (DB) or (3) a hybrid of DC and DB. Fund size, defined as the number of members belonging to a pension fund, was anchored to a six-point scale ranging (1) from less or equal to 100 to (5) more than 500. The age of members was therefore captured on a six-point scale ranging from (1) younger or equal to 20 years to (6) older than 60 years.

DATA ANALYSIS

To achieve the objectives of the study, various data analysis techniques were used. Firstly, financial efficiency scores of the pension funds were calculated by using the Data Envelopment Analysis (DEA) technique. Secondly, the instruments used to measure the latent variables were assessed for reliability and validity. Thirdly, various data analysis techniques were used to test the hypothesised relationships among the variables in the final sample, such as Pearson correlations, Sheffé tests and analyses of variance (ANOVA).

Data envelopment analysis (DEA)

The Frontier Analyst Version 4.10 (2008) computer software program was used to conduct the analysis. This analysis entails the use of linear programming principles to calculate efficiency scores that range from 0 (nil) to 100%. This calculation was done for each year

starting from 2001 to 2008. The average of the eight years was then calculated for each pension fund, which was regarded as each pension fund's DEA score.

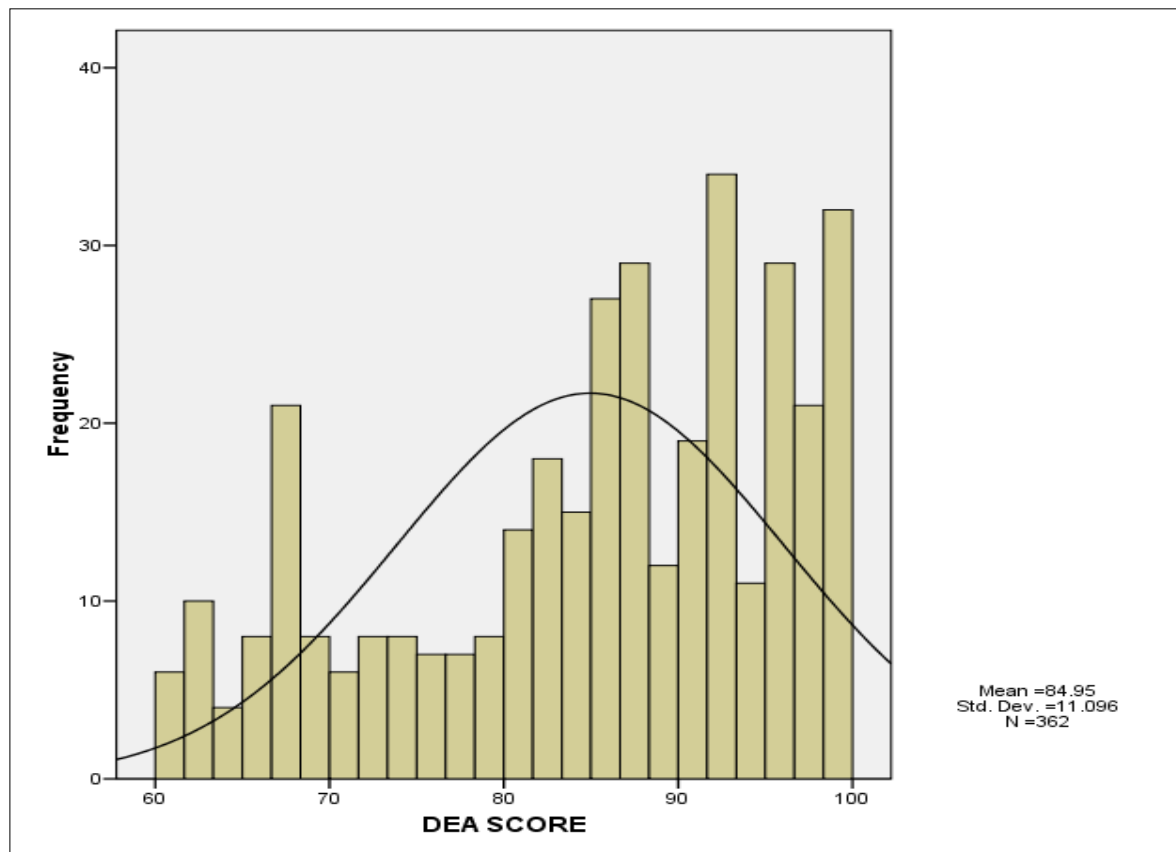
Table 2 summarises the DEA efficiency scores for the 362 pension funds. The Table depicts the minimum DEA efficiency score of 60% and the maximum 100%. The pension funds whose DEA scores were 100% were the best performers whose practices should be copied by those with lower efficiencies.

TABLE 2: DEA SCORES OF PENSION FUNDS

DEA SCORES %	n	%
60 – 69	57	15.7
70 – 79	43	11.9
80 – 89	114	31.5
90 – 99	123	34.0
100	25	6.9
Total	362	100

Figure 4 shows that the minimum DEA efficiency score was 60% and the maximum was 100% with a mean score of 84.95% and a standard deviation of 11.09%.

FIGURE 4: DEA EFFICIENCY SCORES



Source: Authors' own construct

Figure 4 shows that Kenyan pension funds have a wide disparity in DEA efficiency scores, as they range from 60% to 100%. This disparity shows that whereas some pension funds are efficient, others are less efficient and so the efficient pension funds can act as role models for the others.

Reliability of the measuring instruments

The measuring instruments were tested for reliability. Table 3 shows that all the variables produced acceptable reliability scores that exceeded the minimum value of 0.50, which is required for basic or exploratory research (Tharenou 1993; Pierce and Dunham 1987).

TABLE 3: INTERNAL RELIABILITY OF THE INSTRUMENTS

Variables	Cronbach alpha
Fund regulations	0.51
Fund governance	0.60
Operational efficiency	0.63
Fund risk management	0.55
Investment strategy	0.69
Fund ethics	0.88

Validity of measuring instruments

The discriminant validity of the measuring instruments was assessed. For this purpose three sets of exploratory factor analyses were conducted, using the STATISTICA Version 9.0 (2009) statistical software package. Principal Component Analysis was specified as the method of factor extraction and Varimax rotation of the original factor matrix was used in all instances.

TABLE 4: ROTATED FACTOR LOADINGS – EMPIRICAL RESULTS

	FACTOR 1*	FACTOR 2*	FACTOR 3*	FACTOR 4*
	Operational efficiency	Fund leadership	Fund governance	Fund regulations
EFFC1	0.846	0.007	0.079	0.019
EFFC5	0.895	0.049	0.037	-0.029
EFFC11	0.845	-0.013	-0.052	0.087
EFFC13	0.871	0.082	0.013	0.010
ETHC1	0.460	0.027	-0.235	-0.030

ETHC2	0.832	-0.026	0.018	-0.088
ETHC3	0.918	-0.031	-0.030	0.045
ETHC5	0.921	-0.019	0.025	-0.045
ETHC6	0.858	0.132	0.005	0.004
ETHC7	0.833	0.004	0.045	-0.058
ETHC8	0.689	0.153	0.054	0.124
GOVN14	0.628	0.097	0.027	-0.029
REGU10	0.469	-0.115	0.091	0.256
RISK1	0.565	0.111	-0.136	0.073
RISK11	0.587	-0.059	0.026	-0.037
ETHC4	0.019	0.454	0.157	0.186
GOVN2	-0.024	0.571	0.098	-0.159
GOVN12	0.054	0.650	-0.015	0.081
REGU5	0.182	0.514	0.044	0.229
REGU8	-0.038	0.484	-0.192	0.195
STRAT8	0.101	0.431	0.137	0.012
EFFC2	-0.073	0.212	0.429	0.188
GOVN3	0.048	-0.036	0.546	0.170
GOVN6	0.093	0.125	0.437	-0.146
GOVN7	-0.072	-0.030	0.482	-0.037
GOVN10	-0.060	-0.128	0.411	0.116
REGU3	0.092	-0.063	0.508	0.261
RISK4	-0.059	0.295	0.579	0.130
STRAT10	0.051	-0.079	0.408	-0.096
GOVN9	-0.074	0.274	0.106	0.509
REGU1	0.115	0.387	0.192	0.539
REGU2	-0.027	0.076	0.135	0.635
REGU6	-0.017	-0.194	0.151	0.439
RISK5	0.085	0.054	0.058	0.690
STRAT7	0.053	-0.071	-0.126	0.603
Eigen values	8.901	3.325	1.785	1.619
Cronbach alpha	0.94	0.56	0.52	0.61

Note: * = Loadings greater than 0.40 were considered significant

The extraction of six factors, namely operational efficiency, fund ethics, fund regulations, fund governance, risk management and investment strategy, was specified. It was expected that each of the four variables modelled was a separate and distinct construct. The resultant empirical evidence did not, however, support this contention. After considering various options ranging from four to seven factor solutions, it had to be concluded that the instrument used to measure the above-mentioned factors did not demonstrate sufficient evidence of discriminant validity. Four, instead of six, distinctly separate variables could be identified. The most interpretable factor structures for these variables are reported in Table 4.

Table 4 shows that four items, which were originally regarded as measures of operational efficiency (EFFC), load on factor 1. Seven ethics (ETHC1, 2, 3, 5, 6, 7 and 8), one fund governance item (GOVN14), one fund regulation item (REGU10) and two fund risk items (RISK 1 and 11) also load on factor 1. It appears that all these items are related to operational efficiency, for example “remunerating trustees properly” (GOVN14), “not exposing the fund to default risk from sponsors (RISK1) and “not limiting investments in real estate to 5% of fund value” (REGU10). It also appears that the respondents did not distinguish between operational efficiency and fund ethics. They regard the two as being the same. A subsequent EFA on operational efficiency and fund ethics items confirmed that the two were not separate factors. All the above-mentioned variables were therefore regarded as measures of operational efficiency.

Table 4 further shows that two of the earlier envisaged governance items (GOVN2 and GOVN12), two regulation items (REGU5 and REGU8), one ethic item (ETHC4) and one strategy item (STRAT8) load on factor 2. The items are honesty when sharing information with trustees and members (ETHC4), CEO leadership of the pension fund (GOVN2), maintaining an effective performance measurement system (GOVN12), compliance with the pension law (REGU5), effective financial reporting practices (REGU8) and giving wide discretion to external investment managers (STRAT8). It appears that all these items are related to fund leadership and are therefore regarded as measures of that variable.

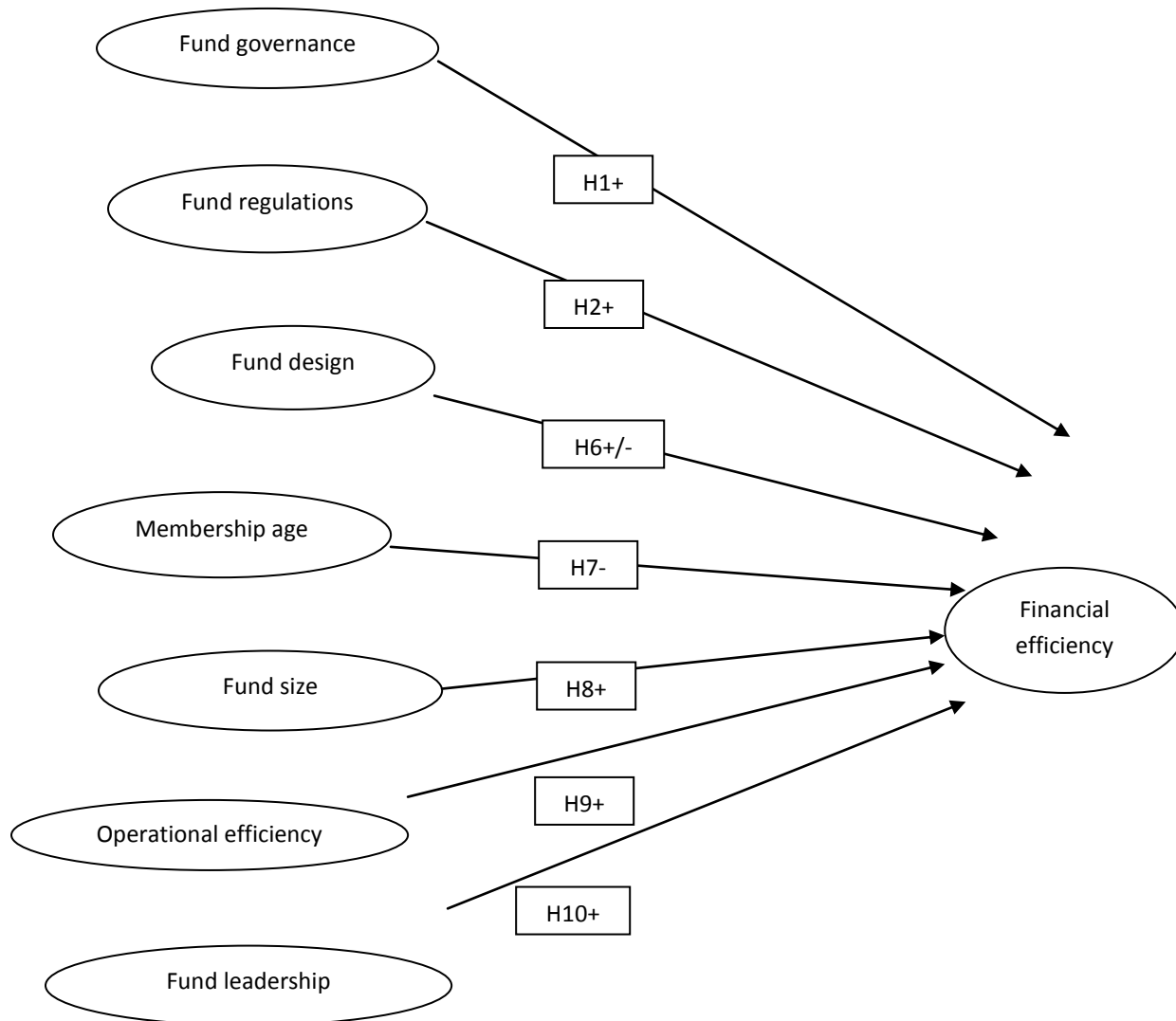
The items that loaded on factor 3 include EFFC2 (decrease in benefits processing period), GOVN3 (continuous education to trustees), GOVN6 (maintaining an effective internal control system to document and monitor the pension fund’s activities), GOVN7 (open communication to members), GOVN10 (clearly defining the roles of the trustees), REGU3

(regulation of fees charged by service providers), RISK4 (bankruptcy of the fund if the sponsor ceases to exist) and STRAT10 (basing investment strategies on market findings). This variable was labelled fund governance (FGOVN).

Factor 4 had six items that loaded onto it. These items were GOVN9 (monitoring performance of the service providers), REGU1 (regulation of compliance costs), REGU2 (limiting the size of the board of trustees), REGU6 (regulatory meetings held by the board of trustees), RISK5 (separation of pension fund management from the sponsor's business) and STRAT7 (maintaining an effective investment policy). This variable was labelled fund regulations (FREGU).

The Cronbach alpha reliability coefficients of constructs as they emerged from the factor analyses were then re-calculated to confirm their internal consistency. Based on the factor analysis results and Cronbach alphas, certain latent variables were reconstructed and another removed from the hypothesised model. Owing to inadequate discriminant validity, the fund ethics, fund risk and investment strategy variables were removed from the final theoretical model while the governance variable was re-defined as was the leadership variable. Table 4 indicates that all the re-calculated Cronbach reliability coefficients were above the 0.500 cut-off point needed for basic research (Tharenou 1993; Pierce and Dunham 1987). All the final scales mentioned in Table 4 were therefore regarded as reliable for inclusion in the final hypothesised model.

FIGURE 5: REVISED HYPOTHESED MODEL TO IMPROVE FINANCIAL EFFICIENCY



The revised hypothesised model

The original hypothesised model was revised after the omission and reconstruction of the various variables in the model. Only the latent variables shown in Table 4 and their corresponding measuring items were included in the revised model (see Figure 5) to improve the financial efficiency of pension funds.

Owing to the emergence of the new variable, fund leadership, from the factor analysis, the following additional hypothesis had to be formulated:

H10: Fund leadership exerts a positive influence on the financial efficiency of pension funds.

All subsequent analyses are based on the above-mentioned revised hypotheses.

EMPIRICAL RESULTS

The relationship between membership age, fund design, fund size and financial efficiency

Main effects ANOVA was conducted to test the relationship between membership age, fund design and fund size, on the one hand, and financial efficiency (DEA) of pension funds, on the other hand. The results of these analyses are reported in Tables 5, 6 and 7.

TABLE 5: THE RELATIONSHIP BETWEEN FINANCIAL EFFICIENCY, MEMBERSHIP AGE, FUND DESIGN AND FUND SIZE – MAIN EFFECTS ANOVA

Independent variable	F-value	p-value	Partial eta-squared
Fund size	38.20	0.000*	0.301
Fund design	1.63	0.203	0.005
Membership age	0.91	0.403	0.005
Degrees of freedom error = 354			

Note: * = significant at $p < 0.01$ level

TABLE 6: THE RELATIONSHIP BETWEEN FINANCIAL EFFICIENCY, MEMBERSHIP AGE, FUND DESIGN AND FUND SIZE – MEANS AND STANDARD DEVIATIONS

Independent variable	Category	N	Mean	Standard deviation
Fund size	< 100		4.35	0.72
	101 – 200		3.85	0.90
	201 – 300		3.07	1.02
	301 – 400		3.08	0.96
	401+		2.62	1.06
Fund design	Defined benefit		3.46	1.12
	Defined contribution		3.66	1.06
Member age	<20 years		0	0
	21 – 30		3.89	0.93
	31 – 40		3.44	1.11
	41+		3.58	1.18

TABLE 7: THE RELATIONSHIP BETWEEN FINANCIAL EFFICIENCY, MEMBERSHIP AGE AND FUND SIZE – SCHEFFÉ TEST

FUND SIZE (as measured by number of members)					
	< 100	101 – 200	201 – 300	301 – 400	401+
< 100		0.014*	0.000**	0.000**	0.000**
101 – 200	0.014*		0.000**	0.000**	0.000**
201 – 300	0.000**	0.000**		1.000	0.109
301 – 400	0.000**	0.000**	1.000		0.133
401+	0.000**	0.000**	0.109	0.133	
MEMBERSHIP AGE (in years)					
	21 – 30	31 – 40	41+		
21 – 30		0.075	0.502		
31 – 40	0.075		0.787		
41+	0.502	0.787			

Note: * = significant at 0.05; ** = significant at 0.01

The results (Table 5) show that only the fund size is related ($F = 38.10$, $p < 0.01$) to financial efficiency. Pearson correlation coefficients were calculated for this relationship, which show a negative relationship between these two variables ($r = -0.54$, $p < 0.05$). This means that pension funds with fewer members are perceived to be more financially efficient than larger pension funds. Based on these results, the hypothesis H8 is not supported.

The results (Table 5) further show that fund size explains 30% of the variance in financial efficiency (DEA scores). The Scheffé test (Table 7) reveals that the DEA mean score (Table 6) for the category of pension funds with a membership of fewer than 100 is significantly different from the DEA mean score of pension funds exceeding 100.

Fund design and membership age (Table 5) are not significantly related to financial efficiency and the DEA mean scores do not differ significantly between the two fund designs as well as the membership age categories. The hypotheses H6 and H7 are not supported. This means that defined benefit (DB) pension fund designs are not more financially efficient than defined contribution (DC) designs and vice versa. The results show however that there were more DB (306) than DC (56) pension funds in the sample.

The relationship between fund governance, regulations, leadership and financial efficiency

One-way Anova was used to test the relationship between fund governance, regulations, leadership and financial efficiency. The results are reported in Table 8.

TABLE 8: THE RELATIONSHIP BETWEEN FUND GOVERNANCE, REGULATIONS, LEADERSHIP AND FINANCIAL EFFICIENCY

Independent variable	F-value	p-value
Fund governance	1.25	0.307
Fund regulations	0.93	0.458
Fund leadership	1.11	0.364
Degrees of freedom error = 38		

Note: * = significant at $p < 0.01$ level

The results show that fund governance, regulations and leadership are not significantly related to financial efficiency. This means that the importance that managers of pension funds attach to fund regulations and how the fund is governed and led does not play a role in achieving financial efficiency. Based on the empirical results the hypotheses H1, H2 and H10 are not supported.

The relationship between operational and financial efficiency

One-way ANOVA was conducted to test the relationship between the operational and the financial efficiency of pension funds. The results of this analysis are reported in Table 9.

TABLE 9: THE RELATIONSHIP BETWEEN OPERATIONAL AND FINANCIAL EFFICIENCY

Independent variable	F-value	p-value
Operational efficiency	0.93	0.458
Degrees of freedom error = 38		

Note: * = significant at $p < 0.01$ level

The results show that the operational efficiency is not significantly related to the financial efficiency. Hypothesis H9 is therefore not supported. This means that operational efficiency, as measured in this study, does not impact on financial efficiency.

DISCUSSION OF RESULTS AND MANAGERIAL IMPLICATIONS

The most important finding of this study is that smaller funds are more efficient compared with the larger funds. The reasons for this finding lie in the fact that large pension funds experience diseconomies of scale (Dahlquist, Engstrom and Soderlind 2000). These diseconomies result from excessive administration costs incurred in communicating to the members, fund administration and regulatory levies (Gallagher and Martin (2005; Chan, Faff, Gallagher and Looi 2004). According to Odundo (2008) and Nyakundi (2009), one of the issues that contribute to the inefficiency of the National Social Security Fund in Kenya is the estimated membership of 800 000 members who are dispersed across the country. This increases the costs associated with the administration of members' accounts and record keeping.

Pension funds with more members are expected to have a higher value in contributions and assets compared with smaller ones (Chan et al. 2004). The funds therefore receive sizable contributions that may result in inefficiency in investments (Dahlquist et al. 2000). Thus the larger pension funds have large sums of money at their disposal that they tend to invest in less profitable ventures as opposed to smaller pension funds with smaller financial resources that force them to allocate the money judiciously to the most profitable opportunities. Moreover, the larger pension funds with huge investments in the stock market are exposed to more risk as opposed to the smaller funds (Bikker and Dreu 2009). With the bearish financial markets in the past three years (2007-2009), bigger pension funds lost more than the smaller pension funds owing to the low values of stock market investments. Managers must therefore guard against their pension funds becoming too big.

The empirical results showed that the fund governance, leadership and regulations do not influence the financial efficiency of Kenyan pension funds. While these results contradict the findings of previous studies as discussed in the hypothesised relationships above, they are congruent with the pension fund environment in Kenya. For example, in a communicative validation exercise (Kelly 2006:381) with 24 pension fund trustees after the study, it was learnt that (1) the indicators of fund governance in the present study were lacking in Kenya, (2) Kenyan pension fund laws are very rigid, allowing little room to think beyond the RBA regulations, and (3) leadership performance measures as tested in the present study are

absent in Kenyan pension funds. Fund governance, leadership and regulations will therefore not have a significant effect on financial efficiency.

The empirical result also showed that membership age does not influence the financial efficiency of pension funds in Kenya. The participants (trustees) participating in the communicative validation exercise found this finding surprising; as their experiences indicate that membership age influences investment strategy. Older members prefer investments in guaranteed funds, while the middle-age group (31 to 40 years) prefer a dynamic investment strategy. The participants also suggested that this and other surprising findings (for example, the non-significant relationship between operational and financial efficiency) could have been caused by the fact that not all trustees are experts on pension fund management issues. Trustees are elected by members through a popular vote, while the sponsor nominates the others.

Finally, the empirical results revealed that fund design does not significantly influence the financial efficiency of pension funds. This finding is inconsistent with conclusions of previous studies which indicated that defined contribution (DC) pension funds are preferred over defined benefit (DB) ones owing to their better decision-making transparency and member involvement; their more cost competitive nature; and their reduced default risk for members (see H5 in the hypothesised relationship section). It appears that Kenyan pension funds already follow the trend of favouring DC funds (306 of the participants in this study were DC funds), possibly making this issue a non-issue.

CONCLUSION

Despite the important contributions of the study, there were limitations and thus areas for improvement. Firstly, due to the absence of existing instruments to measure the variables investigated in this study, particularly as far as pension funds are concerned, self-constructed instruments were used. Some of these instruments produced low reliability coefficients, for example fund leadership ($\alpha = 0.56$) and fund governance ($\alpha = 0.52$). In addition, the instrument used to measure the operational efficiency of pension funds could have been inadequate in capturing what the respondents would have regarded as operational efficiency. This could have led to the insignificant relationship found between operational and financial efficiency. Improved results could therefore be achieved by improving the measuring instruments used in this study.

Secondly, it appears that the trustees were not the most knowledgeable persons on pension fund management as was originally thought. Improved results could emerge if a similar study is done on a sample of executive managers.

In conclusion: the main contribution of this study is the revelation that smaller pension funds are more financially efficient than larger ones owing to the bigger ones sitting on large sums of money and inefficiently investing it. Smaller pension funds have smaller financial resources which they have to invest more judiciously. Furthermore, larger pension funds with huge investments in the stock market are exposed to more risk compared with smaller funds. Smaller pension funds might be more financially efficient than larger ones, but financial efficiency does not necessarily translate into profitability. The link between financial efficiency and profitability was not investigated in this study, which is a limitation that should be explored in further research

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VALIDATION OF A CUSTOMER SERVICE MEASURING INSTRUMENT FOR THE OPHTHALMOLOGY INDUSTRY

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ABSTRACT

Ophthalmology is a specialised medical service. The medical practitioner or specialist is subjected to a specifically challenging business environment. Firstly, medical practitioners and specialists in South Africa are restricted to market their practices and services as specified in their code of ethics. Secondly, a specialised service requires a referral from a general practitioner (or other medical authority) before the patient becomes eligible to claim a consultation from their medical fund. As a result, word-of-mouth referrals by existing patients and references from doctors to the ophthalmology practice are an important marketing source. It is therefore very important for the ophthalmologist to render excellent services (and maintain a high level of customer service) in order to be competitive in the market. As such, service quality is a competitive advantage in business strategy, and needs to be measured and managed accordingly. However, no tailor-made questionnaire exists to measure service quality of the ophthalmology practice.

¹ The article stems from research by A Kadé as part of his MBA degree at the Potchefstroom Business School, Potchefstroom Campus, North-West University.

This study was done at an ophthalmologist's practice in Vanderbijlpark, Gauteng to obtain a better understanding of what the expectations of patients are and what influences patients to make them loyal customers. The objective of the study was, firstly, to develop a tailor-made questionnaire for the ophthalmology practice, to employ it to measure the service, and then to validate the questionnaire as a specialised tool for the ophthalmology practice. The Servqual model of measuring customer satisfaction in five dimensions has been used as basis for the study.

The study employed a variety of reliability and validity statistics in addition to confirmatory factor analysis. High levels of reliability (Cronbach Alpha > 0.75) and validity has been achieved in the analysis. The results obtained indicated that the questionnaire is valid for use to measure the customer service levels of an ophthalmology practice.

INTRODUCTION

In South Africa, the medical profession is restricted in how it advertises and markets practices and services (HPCSA, 2009a). The uniqueness of the medical practitioner as business person resides within the fact that:

- *Firstly*, medical practitioners and specialists in South Africa are restricted the market their practices and services as specified in their code of ethics (HPCSA, 2009b);
- *Secondly*, a specialised service requires a referral from a general practitioner (or other medical authority) before the patient becomes eligible to claim a consultation from their medical fund; and
- *Thirdly*, most business originates from either word-of-mouth among patients, or feedback from satisfied patients to the referring doctor.

Medical practices, therefore, place a high value on the perception conveyed to potential patients and have considerable faith in positive word-of-mouth communication as a marketing tool. It is regarded as one of the most powerful means of marketing communication, more so if it is a known and trusted source such as a social acquaintance or family member. However, for positive word of mouth to realise, patients need to be satisfied with the services they received. It is thus imperative that ophthalmologists formally determine the level of the service they render (Ennew *et al.*, 2000:75).

BACKGROUND²

Ophthalmology is a specialised field in medicine that deals with diseases of the human eye. Ophthalmologists are generally regarded as doctors who treat these diseases surgically. The field in ophthalmology is not limited to diseases of the eye only, but covers all areas that can affect a person's vision, including the eyelids, the lachrymal system as well as the brain. Ophthalmology can also be divided into sub-specialties. Some ophthalmologists prefer working specifically with glaucoma or retinal diseases only, while others prefer refractive surgery such as cataract surgery or performing refractive laser surgery.

The practice in the study is a highly busy and effective healthcare unit. It possesses some of the most advanced technology equipment available to ensure the most accurate measurements can be obtained to give patients the best possible opportunity to improve their vision.

The ophthalmologist is highly skilled and attends congresses and seminars on a regular basis to keep in touch with the latest procedures and advanced technology available. He has also received many accolades for his contribution in the field of ophthalmology. He is often invited to deliver presentations at international conferences, sharing his pearls and pitfalls with others and is regarded as one of the best ophthalmologists in the country by many patients.

The personnel are all trained in the use of the equipment and have completed ophthalmology assistant's courses on various levels. They too are sent to congresses regularly to keep them up to date with what happens in the field of ophthalmology.

Skilled and friendly staff complements the doctor is services, forming an effective team. Although the eye is such a small part of the body, it is one of the most intricate body parts and therefore specialised equipment are used during consultations and examinations, treatments and operations. First impressions of professionalism and quality can have lasting impressions on patients, influencing their loyalty by coming back or referring others through communicating their positive experiences with others. The mission of the practice is to give as many as possible patients the best possible eye care in the shortest time when they visit the practice.

² Excerpt to provide specialized background on ophthalmology from the MBA dissertation by A. Kade: "*Customer service of an ophthalmology practice*"

PROBLEM STATEMENT

In ophthalmology the core value transference is the service supplied by a highly skilled doctor and his or her ophthalmology assistants. It is imperative that high service levels be maintained to retain patients by an ophthalmology practice and that a good understanding of patient behaviour is present at the practice. As such, it is important to focus on customer service as a core managerial trait in order not only to retain customers, but also to gain a competitive advantage in this competitive business environment. A point of departure, however, is to determine the levels of service quality by scientific measurement thereof.

However, currently there is no applied and validated customer service measurement tool for the ophthalmology industry. Measurements of service quality are currently performed by means of:

- Tailor-made measuring tools (which are not scientifically validated);
- Making use of generic service quality tools such as the well-established *Servqual* questionnaire. The questionnaire is not adapted nor altered to fit the industry.
- Adapting established measuring tools in different degrees to fit the proposed industry to be measured (for example the case study on Blue Sky Airways by Pitt and Nel (2001:197-244)). This research similarly adapted the *Servqual* measuring instrument to improve readability and association of ophthalmology patients to the questions posed within the questionnaire.

It may well be argued that using a renowned measuring tool such as *Servqual* (or others) do not require any validation, however, the following points need to be pondered:

- *Firstly*, during development these measuring instruments were extensively validated over a wide variety of industries. However, take *Servqual* as an example (because of its application in this study); the tool was developed during the eighties, published in 1985 and revised in 1988. This time factor surely raises the question that although the instrument were valid then, is that still the case with changing environments and demographics in the South African market?
- *Secondly*, the use of a generic tool in a specialised industry may cause validity questions. In this study the specialised services of ophthalmology serves as an example of an applied and specialised segment within the medical fraternity. Does a generalised model hold its validity once applied when used in such a specialised field application?
- *Thirdly*, does the fact that a standardised questionnaire is slightly adapted to ensure better understanding and association by the selected sample alters its validity or not?

Although adaptations might be regarded as mere semantics, scientific research postulates that validity should rather be confirmed rather than merely assumed. There is limited research risk to confirm validity once again in the application setting. The inverse is, however, not true and could be seriously detrimental to the whole research project.

In summary, the problem that presents itself, is that there is no validated research tool at present that can be used by an ophthalmology practice to measure its customer service levels. This research aims thus to scientifically resolve the issue and provide the ophthalmology practice and industry a valid research tool to use with confidence to measure their service quality levels.

OBJECTIVES

The primary objective of this study is to compile a validated research tool in the form of a customer service questionnaire for an ophthalmology practice.

Following that, the secondary objectives are to:

- Compile a service quality questionnaire applicable to an ophthalmology practice (see Phase 1 in table 1);
- Apply the questionnaire to measure the customer service levels at an ophthalmology practice (see Phase 2 in table 1);
- Analyse the service encounter results (see Phase 3 in table 1); and
- Perform reliability and validity tests to determine the validity and usefulness of the developed questionnaire (see Phase 4 in table 1).

HYPOTHESES

The research postulated the following hypotheses:

H₀: The adapted *Servqual* research instrument is a valid tool to measure service quality in the ophthalmology industry;

H₁: The passing of time did not result in the *Servqual* research instrument to become invalid;

H₂: The generic *Servqual* research instrument is valid in a very specialised application setting;

H₃: Semantic and associative adaptations to the *Servqual* research instrument did not cause it to become invalid;

H_a: The adapted *Servqual* research instrument is not a valid tool to measure service quality in the ophthalmology industry

LITERATURE REVIEW

The focus of this paper is not on the results of the customer service analysis, but on the validity of the research questionnaire that was developed and used to measure the service quality. As a result, the theoretical approach focuses on the research methodology employed to validate the questionnaire. Readers interested in the detail analysis of the service quality measurement are referred to the original research by Kadé (2009). Validity itself, therefore, needs to be defined to set the process of validation in motion.

Validity

The Living Encyclopedia Wikipedia (Wikipedia, 2008a) defines validity as “*the extent to which a test measures what it claims to measure.*” The term validity also refers to whether a study is able to scientifically answer the questions it is intended to answer, and as such, it is vital for a test to be valid in order for the results to be accurately applied and interpreted.

However, it is important to note that the concept of validity has expanded substantially and validity is no longer be limited or influenced solely by reliability. The classical relationship between reliability and validity are also much better and more clearly defined in the modern research (Wikipedia, 2008b). Although various types of validity exist, the important validity concept for this research is construct validity.

Construct validity refers to the operationalisation of a construct in a practical application setting. It involves the validity of test that have been developed from theory. For example: *To what extent is an IQ questionnaire actually measure "intelligence"?* (Wikipedia, 2008b). Construct validity is an important concept for this research, because the validation of at the research questionnaire put forward in this research, requires a high level of construct validity.

- To achieve or prove construct validity, empirical evidence is required to support the theoretical basis of the research. This study aims to provide the empirical evidence that supports the selection of *Servqual* as theoretical basis for the developed research questionnaire. As Wikipedia (2008b) further points out, such evidence includes statistical analyses of the internal structure of the test including the relationships between responses to different test items. Construct validity also assumes relationships between the test and measures of other constructs. Experiments are required to test for construct validity due to its operational nature. As such, experiments designed to reveal aspects of the causal role o

Burns and Grove (1997:232-234), however, warns that construct validity are deteriorated by any one of the following threats:

- Inadequate pre-operational explication of constructs;
- Mono-operation or mono-method bias;
- Hypotheses guessing with experimental conditions;
- Evaluation apprehension;
- Interaction between treatment and testing; and
- Experimenter expectancies.

Reliability

Reliability is defined as: “*the consistency of a set of measurements or measuring instrument, often used to describe a test*” (Wikipedia, 2009). This means that the scale should consistently reflect the construct it is measuring. Reliability has to do with the quality of measurement. In its everyday sense, reliability is the "consistency" or "repeatability" of your measures (Knowledgebase, 2006). An instrument, such as a questionnaire, that produces different scores every time it is used under the same conditions, has low reliability (Field, 2007:666). The question, however, is how to determine the reliability of research data.

According to Santos (1999:2), one of the most popular reliability statistics is Cronbach's alpha as published by the mathematician Cronbach in 1951. Cronbach's alpha determines the internal consistency or average correlation of items in a survey instrument to gauge its reliability (Wuensch, 2009:9). For this research, the minimum coefficient is set at $\alpha \geq 0.70$ (Boshoff and Hoole, 1998:77; Statistica, 2006). However, Kline (1999) in Field (2007:668) reasons that with attitudinal or behavioural constructs, an alpha coefficient of 0.58 is sufficient and that such data is suitable to use for subsequent analytical scrutiny. Regarding other data types, Kline as well as Santos (1999) support Boshoff and Hoole on a minimum coefficient alpha of 0.70.

Significance

Statistical significance in quantitative analysis is used to determine if the difference between two variables (or sets of variables) are of significance so that specific interpretations could be made (Burns and Grove, 1997:621). In addition, it is important to note that statistical insignificance may have a practical significance to the body of knowledge. The effect size calculates the practical significance between two sets of variables (Du Plessis, 2009). In this study, the differences between the expectations and perceptions were determined on this basis, using the practical significance (d) or the *effect size*, as described by Ellis and Steyn

(2003:50-53). The range of the *d-value* is between 0 and 1.0. This implies that a large practical significance is found with a *d-value* of 0.8 and higher. Medium practical significance is identified for *d-values* between 0.5 and 0.8, while a *d-value* of at least 0.2 but less than 0.5 signifies a small effect (Ellis and Steyn, 2003:53).

Factor Analysis

Principle Component Factor Analysis was used as a confirmatory factor analysis tool to determine if the adapted *Servqual* questionnaire still measures the service dimensions it was designed to measure (Du Plessis, 2009). The factor loadings, variance explained and also the possibility of dual factor loadings needs to be analysed (Wuensch, 2009:4; Du Plessis, 2010:29). A factor loadings of 0.40 is considered to be satisfactory, while a cumulative variance of 60% or higher is regarded to be a “*good fit of the data*” (Shukia, 2004).

The study makes use of various confirmatory structured principle component factor analysis. Although this concept may seem confusing at first glance, a simple example may clarify the technique. To determine the validity of the questionnaire, it is important that the questionnaire measures what it is supposed to measure (validity). For example, the first four questions on the original *Servqual* model measures *Tangibility*. The adapted questionnaire (since it retained the original *Servqual* structure) also measures *tangibility* with its first four questions – or does it? To answer this question the data of the first four questions is subjected to the principle component factor analysis to determine if these questions all load onto one factor. If they do, it confirms that the factor identified is still tangibility, and none of the statements have “fallen off”. These four questions thus measure what they were supposed to measure, namely tangibility, and are thus validated (Du Plessis, 2009).

The rotation method selected was a Normalised Varimax rotation. However, since only one factor was factors extracted (loaded normally, not restricted to one), the rotation of the factor structure becomes irrelevant (Du Plessis, 2009).

Bartlett test of sphericity

The Bartlett test of sphericity is an indicator of the strength of the relationship among variables and an indicator of the suitability of the data towards a multivariate statistical technique such as factor analysis (UCLA, 2010). It is a test statistic that is used as gatekeeper for further analysis. The Bartlett test examines the hypothesis that the variables are uncorrelated in the population. Thus, the population correlation matrix is an identity matrix; each variable correlates perfectly with itself ($r = 1$) but has no correlation with the other variables ($r = 0$) (Mediaspace, 2007). Bartlett's test of sphericity is used to test the null

hypothesis that the variables in the population correlation matrix are uncorrelated (Coakes and Steed, 1997). The observed significance level is .0000. It is small enough to reject the hypothesis. It is concluded that the strength of the relationship among variables is strong. It is a good idea to proceed with a factor analysis because the data should yield a p-value smaller than 0.0001. This indicates that the correlation between the variables is sufficient for factor analysis (Du Plessis, 2009:58).

In conclusion, although the tests for Bartlett and Kaiser-Meyer-Olkin are both employed to assist in the decision on the suitability of factor analysis, the Bartlett's test of sphericity tests whether the correlation matrix is an identity matrix. If so, it indicates that a factor model is inappropriate. On the other hand, the Kaiser-Meyer-Olkin measure of sampling adequacy tests whether the partial correlations among variables are small (Matlab, 2010; UCLA, 2010).

Kaiser-Meyer-Olkin measure of sampling adequacy

Mediaspace (2007) state that the Kaiser-Meyer-Olkin measure of sampling adequacy is “an index for comparing the magnitudes of the observed correlation coefficients to the magnitudes of the partial correlation coefficients”. This measure of sampling adequacy determines if the relationship between variables is strong enough to proceed with a factor analysis and returns a value between 0 and 1. Large values for the KMO measure indicate that a factor analysis of the variables is a good idea. The inverse is also true as the K-M-O also supplies vital information when not to use factor analysis. For values smaller than 0.5, the factor analysis is likely to be inappropriate. A K-M-O value of 0.6 should be present before factor analysis is considered (Wikipedia, 2010b), although values between 0.5 and 0.7 are mediocre (Du Plessis, 2009:26). Values between 0.7 and 0.8 are good while the values between 0.8 and 0.9 are excellent. Values between 0.9 and 1 are superb (Field, 2007:640). The larger the K-M-O value, the more reliable the factor analysis for this particular sample size (Du Plessis, 2009:26). Positive outcomes on these tests validate the use of factor analysis as a confirmatory tool (Friel, 2005).

Factor comparison

In order to compare two factor structures that have been extracted by factor analysis, the normal visual comparison (or so-called eyeball test) is employed to determine if the same statements loaded onto each of the factors. Although it may reveal interesting comparisons on the common statements and their factor loadings, this comparison is neither scientific nor accurate (Wuensch, 2009:11). One method to do such a comparison is the *Salient Similarity Index* by Catell where the two pattern loadings are classified into either positive or negative

salient constructs and then compared. However, the comparison remains difficult and the sampling error alone may cause inversions in the factor order (Wuensch, 2009:12).

Another more acceptable method of factor comparison is to make use of correlation coefficients between the factors (Wuensch, 2009:13). If strong correlations exist between the factors and its statement that loads onto the factor, it is plausible to perform comparative analysis between the factors (such as the analysis of service gaps and the calculation of the effect size (Wikipedia, 2001). The factor congruent correlation coefficient is usually calculated to serve this purpose, but a factorial Pearson coefficient is also regarded as a satisfactory correlation measure (Wuensch, 2009:13-14).

The method of choice in this study is the Pearson correlation coefficient because of its ability to not only determine the differences in the two factors' pattern of loadings, but also the differences (or similarities) in the magnitude of these loadings, even if dissimilarities exist the factor loadings.

RESEARCH METHODOLOGY

The research methodology consists of four stages. These stages, as well as the action steps and techniques followed to achieve the objectives, are illustrated in Table 1.

TABLE 1: RESEARCH METHODOLOGY

PHASE	ACTIONS	TECHNIQUES EMPLOYED
1	Develop the questionnaire	<ul style="list-style-type: none"> • Exploratory interviews • Draft questionnaire • Testing the questionnaire with focus groups
2	Measure customer service	<ul style="list-style-type: none"> • Data collection • Recording
3	Analysis of service quality data	<ul style="list-style-type: none"> • Reliability of data (Cronbach Alpha) • Calculate <i>Expectations</i> and <i>Perceptions</i> • Perform a Gaps analysis • Determine the significance of gaps (Effect size)
4	Validity of questionnaire	<ul style="list-style-type: none"> • Suitability of data for factor analysis (Bartlett test and Kaizer-Meyer-Olkin

measure)

- Factor analysis (employed as confirmatory factor tool)
 - Factor congruence (or correlations between factors)
-

Phase 1: Develop the questionnaire

When creating a draft questionnaire, a literature study revealed no ophthalmology related or applied questionnaire that could be used as a basis for the questionnaire. In addition, the wide application and popularity of the well-known *Servqual* questionnaire showed promise. One of the strengths of the *Servqual* methodology is that it has been used in a large number of studies, and therefore, it would be possible to make comparisons between different types of service industries (Hart, 1996:1237). (Specifically this strength played an important part in the selection of the *Servqual* model as basis for this research.) Furthermore, with regard to the gaps analysis, it was decided to adopt also the *Servqual GAP 5* methodology to evaluate the gap between the expectancy customers have of service at the practice, and the actual service they experienced when visiting the practice.

As a result, the *Servqual* questionnaire was adopted as a basis for the ophthalmology questionnaire. Informal interviews with patients, staff and ophthalmologists were used to test the concepts of *Servqual* in the application setting, and the positive outcomes of these interviews resulted in the drafting of a questionnaire based strongly on *Servqual*. Three application concepts were adopted from *Servqual*, namely:

- Measurement of *Expectations*, *Perceptions* and the *Gap* between them (*Gap 5* as it is known in the *Servqual* model);
- The concept of the five service dimensions: *Tangibility*, *Reliability*, *Responsiveness*, *Assurance* and *Empathy*; and
- The number of questions used (thus standardizing the ophthalmology questionnaire also at 22 questions).

Next, the questions, as it was formulated by *Servqual*, were adapted to suit an ophthalmology practice. This questionnaire was tested among a focus group consisting of fifteen random patients to ensure that they understand the questions, and would be able to complete the questionnaire objectively without any assistance (as this would be required during the data collection phase). Modifications were made to the questionnaire to make the

statements clear and understandable to patients. Finally, demographic variables applicable to the ophthalmology industry were added to the questionnaire.

Phase 2: Measure customer service

Patients suffering from various eye diseases were randomly selected for participation in completing the questionnaires. No specific preference was given to age or gender and all were included. The sample was limited to clients of a specific ophthalmology practice in the Vaal-triangle region. The respondents were randomly requested to complete the adapted *Servqual* questionnaire when they visited the practice, and to hand the questionnaire to reception personnel after completion thereof. A 7-point Likert scale was employed. The response rate was very satisfactory. A total of 168 questionnaires were completed of which 125 was usable, signifying a usability rate of 74.4%.

Phases 3 and 4 of the research are presented as the results of the study.

CONTEXT OF SERVICE QUALITY IN THE MEDICAL FRATERNATY

The paper focuses on the validation of the questionnaire, and as a result, only a brief overview of service quality and the well-known *Servqual* model is provided here.

Understanding and interpreting customer behaviour is easier said than done, especially in the medical fraternity. Meeting a customer's need entails an understanding who the customer is, and what influences them. Hawkins *et al.* (1998:7) define consumer behaviour as a "*complex, multidimensional process*". Smith (1997:1) describes a customer as "*an individual to whom a product or service is provided.*" In economic terms, it relates to benefits for the customer as well as to the provider. The customer is willing to pay a price for a given service delivered by the provider. In this study, customers are patients to whom medical services are provided and focus on a specific ophthalmologist's practice.

Freeman (2005:106) describes medical services as the involvement and participation of customers in the services rendered, and therefore relates to patients as key participants in a medical service. In understanding service quality it is important to note that one of the characteristics of service quality is the intangibility of it. Most services cannot be counted, inventoried or tested, and is difficult to be measured in advance to assure quality (Parasuraman *et al.*, 1985:42). Because of the intangibility of services it can be concluded that other factors such as pricing, personnel behaviour and equipment used to deliver the service may influence the perceived quality of service. Freeman (2005:106) shares the same

view and adds that another characteristic of a service is the relative lack of standardisation of services compared to that of goods.

Measuring physician quality is also a more complicated task. Many patients think of doctors' quality of service as a commodity such as a telephone service - it either works or doesn't. Patients often have an uninformed opinion regarding qualified doctors they know. Many doctors themselves are reticent about having their colleagues do an assessment of physician quality (Denning, 2002:62). It is therefore suggested that doctors should do the assessment themselves. *Firstly*, a decision should be made about what is regarded as quality, and *secondly*, decide what is relevant, and then *thirdly*, measure it. The results obtained from the study should then be evaluated and where results are not good enough, work should be done to improve it.

Doctors and specialists are firstly caregivers and as Bendix (2007:56) states, the one thing doctors are not taught in medical school is that, as professionals, they are also business owners. In today's competitive medical environment and hostile economical climate it is essential for medical practitioners to deliver services at a high level, thus to create customer satisfaction in order for patients to return. Freeman (2000:8) distinguishes between technical quality and functional quality, and there should be a dichotomy between the two components to create the desired image of the practice. Technical quality relates to the reason an individual seeks medical attention, and the functional quality relates to the supplemental services. Medical practitioners regard factors that influence patient behaviour to be:

- *Availability* – the location of the practice and ease of getting an appointment is most often regarded as the first factor a customer takes into consideration when choosing a medical practitioner.
- *Affability* – friendliness is regarded as the second factor that influences patients to select this specific medical practitioner.
- *Ability* – the skill of the practitioner is most often regarded as the third factor that influences patient behaviour when selecting a medical practitioner.

RESULTS (Phase 3)

The spreadsheet programme Microsoft Excel was used to do the inferential calculations. However, for the more advanced statistics (such as the reliability tests, suitability tests and factor analysis), the advanced statistical software package SPSS was employed.

Reliability

The reliability of the data was statistically determined by employing the coefficient of Cronbach Alpha (α). The reliability measures appear in Table 2. (All the tables make use of the abbreviations: *P* = *Perceptions* and *E* = *Expectations*.)

TABLE 2: VALIDITY OF THE DATA

	E	P	TOTAL DATA
Cronbach Alpha	0.9983	0.9986	0.9979

For this research, the minimum coefficient is set at $\alpha \geq 0.70$ (Boshoff and Hoole, 1998:77). The attitudinal data used in this research resulted in a very satisfactory coefficient alpha of 0.9979, a value which exceeds both the 0.58 (Field, 2007) and 0.70 (Statistica, 2006) minimum coefficients. The reliability of each individual item was also calculated. All items had a very favourable alpha value in excess of 0.98 (See Table 2).

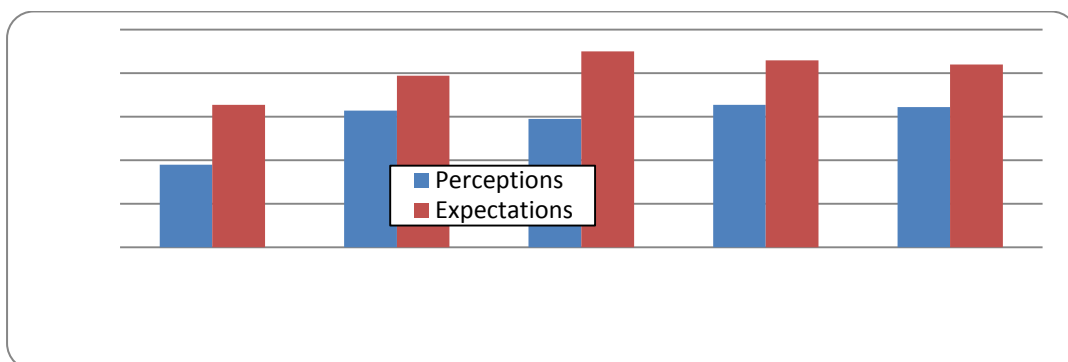
Effect size

For this study, *d-values* of 0.05 and above (thus indicating medium or high levels of practical significance) are considered significant differences between the perceptions and the expectations. The results of the effect size regarding the service dimensions are shown in Table 4.

Analysis of the questionnaire

The results from the analysis are presented in Figure 1.

FIGURE 1: SERVICE DIMENSIONS



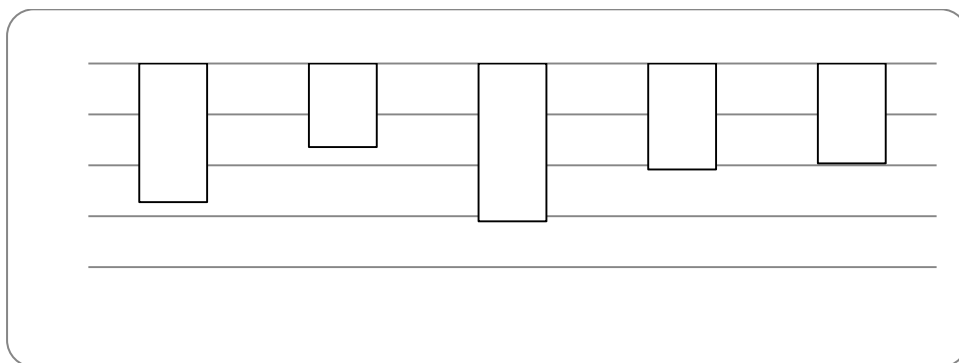
From the figure it is clear that high scores were recorded at the practice (index scores calculated). The analysis of the data shows that all customers are generally happy with the services they received at the practice. The detail scores as well as the reliability of each

score are shown in Table 3. From the table the scores are clearly visible and show that the services rendered to customers exceeded their expectations. The mean scores for the 22 statements are for perceptions: 6.593 (on the 7-point Likert scale) and for expectations 6.705, with a mean gap of 0.637 on the Likert scale.

The gaps of the dimensions (P-E)

The gaps analysis (as shown in Figure 2) is a secondary measure. For example, if the perceived serviced was recorded as very bad (P=1), but the customers have expected it to be very bad (E=1), the gap would be zero, signifying that the service levels were as expected. However, if the service was excellent (P=7) and the expectancy was also very high (E=7), the gap would also be zero. An isolated analysis of the gaps would thus incorrectly reveal that there is no differentiation between the services delivered (Boshoff and Du Plessis, 2009:43).

FIGURE 2: SERVICE DIMENSIONS GAPS



Therefore, the actual scores serve as the primary measure. In this study, all the dimensions of the patients' expectations exceeded perceptions. In the comparison between the dimensions it is notable that the patients regard the responsiveness of the doctor and the assistants as the most negative gap regarding the practice. Tangibles follow closely in its negative gap analysis. It is therefore no surprise that the practical significance of the gaps (as shown in Table 4) is notable within these two service dimensions.

Significance of the gaps

As stated, the effect size is employed as measure to determine if significant differences exist between the perceptions and the expectation of the patients. The practical significance of the five service dimensions, the practical significance is shown in Table 4.

TABLE 3: SERVQUAL SCORES, CRONBACH ALPHAS AND STANDARD DEVIATIONS

DIMENSION	STATEMENT	AVERAGE SCORES		P - E	CRONBACH ALPHA		STANDARD DEVIATION		AVERAGE FOR DIMENSION
		E	P		E	P	E	P	
Tangibles	1. Modern looking equipment	6.424	6.568	-0.14	0.999673	0.999670	0.864	0.755	-0.136
	2. Facilities visually appealing	6.440	6.584	-0.14	0.999669	0.999673	0.766	0.637	
	3. Personnel neat in appearance	6.640	6.816	-0.18	0.999668	0.999676	0.640	0.465	
	4. Materials visually appealing	6.464	6.544	-0.08	0.999668	0.999676	0.746	0.798	
Reliability	5. Admin delivered on time	6.520	6.672	-0.15	0.999667	0.999678	0.736	0.657	-0.082
	6. Sincere interest in problems	6.632	6.664	-0.03	0.999667	0.999679	0.666	0.647	
	7. Performed right first time	6.648	6.736	-0.09	0.999666	0.999681	0.651	0.556	
	8. Performed on time	6.632	6.704	-0.07	0.999666	0.999682	0.629	0.648	
	9. Accurate records	6.640	6.704	-0.06	0.999687	0.999666	0.640	0.596	
Responsive-	10. Informed about services	6.584	6.704	-	0.999686	0.999666	0.686	0.672	-0.155

ness				0.12					
	11. Prompt service	6.624	6.744	- 0.12	0.999684	0.999669	0.668	0.581	
	12. Personnel willing to help	6.632	6.840	- 0.21	0.999682	0.999667	0.666	0.987	
	13. Personnel's response to requests	6.548	6.720	- 0.17	0.999680	0.999666	0.691	0.655	
Assurance	14. Instil confidence	6.640	6.760	- 0.12	0.999679	0.999666	0.677	0.545	-0.104
	15. Feel safe	6.656	6.760	- 0.10	0.999677	0.999667	0.649	0.545	
	16. Consistently courteous	6.640	6.752	- 0.11	0.999676	0.999667	0.640	0.604	
	17. Knowledge in answering questions	6.568	6.648	- 0.08	0.999675	0.999668	0.733	0.663	
Empathy	18. Individual attention	6.592	6.720	- 0.13	0.999674	0.999669	0.697	0.604	-0.098
	19. Operating hours	6.520	6.600	- 0.08	0.999672	0.999670	0.789	0.696	
	20. Personal attention	6.672	6.760	- 0.09	0.999670	0.999671	0.632	0.559	
	21. Patient's interest priority	6.672	6.768	- 0.10	0.999670	0.999672	0.645	0.526	

	22. Understand needs	6.656	6.752	- 0.10	0.999667	0.999667	0.685	0.563	
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Where: E = Expectations; and P = Perceptions

TABLE 4: PRACTICAL SIGNIFICANCE OF SERVICE DIMENSIONS

ITEM	E	P	DIFFERENCE IN AVERAGE	STANDARD DEVIATION	EFFECT SIZE
Tangibility	0.9977	0.9982	0.258	0.877	0.294*
Reliability	0.9989	0.9989	0.614	0.664	0.925**
Responsiveness	0.9986	0.9981	0.097	0.678	0.143
Assurance	0.9990	0.9992	0.109	0.679	0.160
Empathy	0.9988	0.9991	0.090	0.688	0.131

*Medium practical significance

* Large practical significance

VALIDITY OF QUESTIONNAIRE (Phase 4)

From Table 1, the final phase of the research (validate the questionnaire for the use by ophthalmologists) requires confirmatory factor analysis to validate that the criteria used to measure service quality actually do measure what it was intended to measure. The test for questionnaire validity consists of three steps, namely:

- Step 1: Subject the service dimension to a factor analysis to determine if all the criteria relating to the dimension load onto the specific dimension as a factor.
- Step 2: Test the suitability of factor analysis for the criteria by using a dual test, namely the *Bartlett test of Sphericity* (Coakes and Steed, 1997) and the *Kaiser-Meyer-Olkin Measure of Sampling Adequacy* (Friel, 2005).
- Step 3: Determine if there is a strong correlation between the confirmed factor on expectations and the related confirmed factor on perceptions. For example the correlation between: *Tangibility (Expectations)* versus that of *Tangibility (Perceptions)*.

TABLE 5: CONFIRMATORY FACTOR ANALYSIS AND FACTOR CORRELATIONS

EXPECTATIONS		PERCEPTIONS		FACTOR CORRELATION: (Pearson r ²)	
CRITERIA	TANGIBILITY	CRITERIA	TANGIBILITY		
E2	.915	P2	.910	0.933	
E4	.872	P1	.820		
E1	.859	P4	.729		
E3	.821	P3	.715		
<i>Bartlett test</i>	.000	<i>Bartlett test</i>	.000		
<i>K-M-O</i>	.817	<i>K-M-O</i>	.728		
<i>Cumulative variance explained</i>	75.240	<i>Cumulative variance explained</i>	63.610		
CRITERIA	RELIABILITY	CRITERIA	RELIABILITY		0.856
E7	.942	P7	.861		
E9	.914	P8	.853		
E5	.895	P9	.815		
E6	.892	P6	.801		
E8	.829	P5	.794		
<i>Bartlett test</i>	.000	<i>Bartlett test</i>	.000		
<i>K-M-O</i>	.833	<i>K-M-O</i>	.829		
<i>Cumulative variance explained</i>	80.380	<i>Cumulative variance explained</i>	68.107		
CRITERIA	RESPONSIVENESS	CRITERIA	RESPONSIVENESS	0.982	

TABLE 5: CONFIRMATORY FACTOR ANALYSIS AND FACTOR CORRELATIONS (continued)

CRITERIA	ASSURANCE	CRITERIA	ASSURANCE	0.985
E16	.939	P18	.906	
E18	.935	P15	.902	
E15	.934	P17	.893	
E17	.926	P16	.870	
E14	.906	P14	.838	
<i>Bartlett test</i>	.000	<i>Bartlett test</i>	.000	
<i>K-M-O</i>	.846	<i>K-M-O</i>	.886	
<i>Cumulative variance explained</i>	86.120	<i>Cumulative variance explained</i>	77.816	
CRITERIA	EMPATHY	CRITERIA	EMPATHY	
E22	.943	P21	.933	
E20	.926	P22	.919	
E21	.902	P20	.885	
E19	.857	P19	.730	
<i>Bartlett test</i>	.000	<i>Bartlett test</i>	.000	
<i>K-M-O</i>	.846	<i>K-M-O</i>	.784	
<i>Cumulative variance explained</i>	82.350	<i>Cumulative variance explained</i>	75.767	

The analysis for all three steps appears in table 5. From the table it is evident that all the criteria (on both the *Expectations* and *Perceptions*) load only on one factor each. These criteria also display high factor loadings, and all of the loadings exceed 0.70 (displaying excellent factor loadings). In addition, the cumulative variance explained on all the factors exceed 75% cumulative variance explained with a number of factors relating to *Expectations* explaining in excess of 80%. The variance explained by the *Perceptions* is also high, although somewhat lower than the counterparts on *Expectations*. The variance explained exceeds 60%.

Regarding the *Bartlett test of Sphericity* and the *Kaiser-Meyer-Olkin Measure of Sampling Adequacy*, all factors returned values below 0.0001 for Bartlett and values higher than 0.70 indicating that the data was suitable for the use of factor analysis.

Regarding the final step in the tests for validity of the questionnaire, the Pearson correlation coefficients calculated show that all factors correlate very high (> 0.85) with their counterparts (*Expectations* correlate highly to *Perceptions*).

ACCEPTANCE OR REJECTION OF HYPOTHESES

From the research the hypotheses are accepted or rejected as follows:

- H₀:** The adapted *Servqual* research instrument is a valid tool to measure service quality in the ophthalmology industry (**ACCEPTED**);
- H₁:** The passing of time did not result in the *Servqual* research instrument to become invalid (**ACCEPTED**);
- H₂:** The generic *Servqual* research instrument is valid in a very specialised application setting (**ACCEPTED**);
- H₃:** Semantic and associative adaptations to the *Servqual* research instrument did not cause it to become invalid (**ACCEPTED**); and
- H_a:** The adapted *Servqual* research instrument is not a valid tool to measure service quality in the ophthalmology industry (**REJECTED**).

CONCLUSIONS AND RECOMMENDATIONS

From the research the following conclusions are drawn:

- In general, the methodology to employ an adapted *Servqual* questionnaire is suitable to measure customer satisfaction in an ophthalmologist's practice.
- The reliability of the data employed in this measuring instrument is high and above the minimum requirements (Cronbach Alpha > 0.75). This sets the scene to continue with the validation of the questionnaire.

- The effect size proves to a successful statistical technique to determine the practical significance of the gaps.
- The *Bartlett test of Sphericity* and the *Kaiser-Meyer-Olkin Measure of Sampling Adequacy* returned excellent values and as such the data was suitable to perform factor analyses.
- The factor analysis indeed confirmed that the criteria related to each service dimension in the original questionnaire (*Servqual*), also do measure these service dimensions on the new adapted questionnaire for the ophthalmology practice.
- The identified factors are strongly correlated (Pearson correlation coefficient), and as such, the service dimensions can be compared to one another – thus enabling the gaps analysis.
- The questionnaire is suitable for use by the ophthalmology practice environment as it was tested for validity. The questionnaire passed all the tests.

Finally, it is recommended that:

- The questionnaire is used as a valid research tool in the ophthalmology environment; and that
- The questionnaire be re-validated after extensive data has been collected.

SUMMARY

The aim of the study was to develop a questionnaire to measure customer service levels in ophthalmology practices, then to apply, test and validate the questionnaire. The study set four objectives to do so, all of them reached. The result is that a questionnaire was developed, put into practice to measure service levels, and then tested stringently to ensure that the questionnaire is valid for use in the industry. The analysis finally revealed that the questionnaire is ready to be applied as a service quality measurement tool for the ophthalmology industry.

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APPENDIX 1: VALIDATED CRITERIA IN QUESTIONNAIRE

ITEM	STATEMENT
1	Excellent ophthalmologists' rooms will have modern looking equipment.
2	The physical facilities at excellent ophthalmologists' rooms will be visually appealing.
3	Employees at excellent ophthalmologists' rooms will be neat in appearance.
4	Materials associated with the service (such as pamphlets, statements, etc.) will be neat and visually appealing.
5	When excellent ophthalmologists' rooms promise to do something by a certain time, they will do so, e.g. authorizations and reports.
6	When a patient has an eye related problem, excellent ophthalmologists' rooms will show a sincere interest in solving it.
7	Excellent ophthalmologists' rooms will perform the service right the first time.
8	Excellent ophthalmologists' rooms will provide the service at the time they promise to do so.
9	Excellent ophthalmologists' rooms will insist on error-free records.
10	Employees at excellent ophthalmologists' rooms will tell patients exactly when services will be performed.
11	Employees at excellent ophthalmologists' rooms will give prompt service to patients.
12	Employees at excellent ophthalmologists' rooms will always be willing to help patients.
13	Employees at excellent ophthalmologists' rooms will never be too busy to respond to patients' requests.
14	The behaviour of employees at excellent ophthalmologists' rooms will instil confidence in patients.
15	Patients of excellent ophthalmologists' rooms will feel safe in their dealings with the ophthalmologists' rooms.
16	Employees at excellent ophthalmologists' rooms will be consistently courteous with patients.
17	Employees at excellent ophthalmologists' rooms will have the knowledge to answer patients' questions.
18	Excellent ophthalmologists' rooms will give patients individual attention.
19	Excellent ophthalmologists' rooms will have operating hours convenient to all their patients.

20	Excellent ophthalmologists' rooms will have employees who give patients personal attention.
21	Excellent ophthalmologists' rooms will have their patients' best interest at heart.
22	Employees at excellent ophthalmologists' rooms will understand the specific needs of their patients.

**THE CONTRIBUTION OF EYE TRACKING IN E-COMMERCE WEB SITE USABILITY
EVALUATIONS**

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ABSTRACT

The accelerated growth of the Internet has inspired related research and the development and implementation of commercial E-Commerce (EC) applications. One of the related research areas is web site usability and the associated user interface design. Human-Computer Interface (HCI) guidelines specify that for an EC web site to be successful, it is important to make the online shopping experience of an Internet user match the users' requirements and needs. New techniques have been applied to HCI in order to better understand the user's experiences utilising a web site, the user's needs and their contentment with the user interface.

Eye tracking evaluations have been applied to HCI by analysing the usability of computer user interfaces. The developers of E-Commerce computer user interfaces follow usability guidelines to implement web site interfaces. The web sites are generally evaluated by using usability guidelines that provide a more detailed checklist for web site designers. Users are further required to complete a usability questionnaire to evaluate the user's satisfaction with the user interface. New technologies are constantly being utilised to improve web site usability evaluations. Eye tracking allows researchers to see where the user is focusing their attention on the web site and can provide additional information not provided by standard usability evaluations.

This research, using an eye tracker, investigates the cognitive processes that a novice and experienced users experiences when shopping online and establishes whether this process adds insight or value to usability testing. A pilot and main study was conducted using two popular Internet web sites, Kalahari.net and Amazon.com. The results showed how eye tracking provided additional information on web site usage and user satisfaction not generally obtained by web site usability testing.

Keyword: Electronic Commerce, Web site Usability Evaluations, Eye tracking.

INTRODUCTION

The way people buy and sell goods and services has significantly been changed by the Internet. The accelerated development and growing popularity of the Internet-based World Wide Web (WWW) is a strong motivation for companies to use this medium to not only promote but sell their products and services (Callahan and Koenemann, 2000). It is believed that the Internet has changed people's business activities faster than any other technology

developed thus far (Schneider, 2007). Businesses recognise that the use of information technology (IT), including the Internet, has become a primary survival factor in the global competitive environment (Chang, 2007).

The accelerated growth of the web has inspired many Internet related research and the implementation of E-Commerce (EC) commercial applications (Erinaki and Vazirgiannis, 2003). One important EC model utilised by businesses today is B2C (Business to Customer) transactions, specifically online shopping. The growth of EC requires the implementation of proper usability guidelines and methodologies to evaluate EC web sites (Chang, 2007). Aladwani and Palvia (2002) describe the three dimensions for web site quality, namely: content quality, website content and web site presentation. Nielson (2008) indicates that the quality of web sites determines which businesses benefit the most. In order to compete with the rest of the e-market, new methods need to be implemented to accomplish and evaluate this quality.

The usability of a web site is important when designing the user interface of an EC application. The user expertise is the user's experience with the specific user interface of a specific web site. Users are normally classified as either experts or novices, or somewhere in-between. Novice and expert users have different methods of selecting the correct menu items. An expert user typically knows the menu item they want to select and is able to memorise the location of menu items. Contrasting to expert users, novices do not tend to know what menu item they want to select or its location and tend to have to search for it. This means that expert users generally tend to make faster menu selections (Padilla, 2003).

Different empirical definitions of novice and expert users exist however the criteria used for the differentiation between novice and expert users are the knowledge and the time spent working a particular user interface of a computer system (Prumper, Frese, Zapf and Brodbeck, 1991).

Novice users are generally concerned with how to do things instead of how fast they can do it. Expert users don't only know more but they know "differently". They have the ability to take large amounts of information and see it as connected units. Expert users are goal orientated. When using an interface, they quickly deduce goals and actions to achieve those goals. They want a highly efficient interface and would thus like the number of interactions to be reduced (Wu, 2008). The user experience has an influence on participant's performance and behaviour as evident from an e-learning study comparing experts and novices (non-experts) (Van Biljon and Pretorius, 2009).

A company's web site usability is a crucial metric for assessing the company's EC initiatives.

A measure of a web site's usability should provide a rating for a specific web site and also highlight the strengths and weaknesses about the web site (Chang, 2007). In order to conduct usability evaluations requires a clear set of objectives and procedures / methods that are already in place before the actual evaluation commences.

One such method is adhering to usability guidelines (Pretorius, 2005). Developers of usability guidelines include people who are involved in the creation and maintenance of web sites and researchers who study and refine these guidelines (Pretorius, 2005). The main role of usability testing is to provide web site designers with a check list when designing web sites. For example, is the web site efficient, easy to use, easy to learn to use and effective to use? Usability guidelines provide a means of less complicated user interfaces and make web site interfaces, more usable.

A subset of usability testing is the use and development of usability design guidelines. Usability guidelines provide a more detailed checklist for web site designers. An example of a usability guideline suggests displaying a series of related items in a vertical list rather than as continuous text because users find it easier to scan lists vertically or horizontally rather than reading a comma delimited paragraph (Pretorius, 2005). Usability guidelines should be prescriptive as they are not a comprehensive set of academic theory that has a predictive value.

Martim, Herselman and Van Greunen (2009) concluded that SA retail companies are aware of usability but limited usability analysis is conducted. For example, e-commerce websites need to update their search engines to provide relevant results which meet the users' expectations; provide step by step simple registration process to enable users to register with ease; improve navigation, make error messages useful and clear, visible and precise.

One additional method that can be incorporated into the usability evaluation of an Internet web site is a heuristic evaluation developed by Molich and Nielson (1990). Nielson (2008) refers to the heuristics not as specific guidelines but rather as rules of thumb. The usability guidelines and heuristics during usability evaluation improve the usability of a web site. New technologies such as eye tracking are now being utilised to enhance web site usability evaluations.

New technologies are constantly being developed to improve web site usability evaluations. Eye tracking commonly refers to the technique used to record and measure eye movements (Tobii Technologies, 2010). Eye tracking allows researchers to see where the user is focusing their attention on a web site and can provide an indication of how the information is perceived by the user. Most eye tracking studies aim to identify and analyse patterns of

visual attention of individuals when performing specific tasks (for example reading, searching, scanning an image, and driving (Tobii Technologies, 2010).

This research investigates, using the eye tracker, the cognitive processes that a user experiences when shopping online and discover if this process adds insight or value to usability testing. Users are reluctant to indicate when they are experiencing problems with a web site. Novice users normally feel that if they could not complete a task that it is their fault. Eye tracking can provide information to why users find it difficult to complete a task, or why users take longer to complete a task compared to others. The benefit of eye tracking and the additional information it provides during a usability study is illustrated by the experiments and analysis done in this research. The research project used eye tracking evaluation in usability testing of EC B2C category web sites and investigated what additional information eye tracking can add to the usability evaluation process.

PROBLEM INVESTIGATION

The Internet does not always reach its true potential as people in general are reluctant to use the Internet either because they do not trust online shopping or web site interfaces are too complicated to understand and difficult to use. Schneider (2007) found that few businesses achieve all their goals for their web sites because of their current web presence. Nielson (2008) indicates that the users' needs are not catered for and that obtaining more information about the users and their needs is achieved by conducting usability evaluations.

The focus of this research is to evaluate two EC web sites using traditional usability guidelines and additionally incorporating eye tracking into the process of usability evaluations. The main reason for the investigation is to establish if eye tracking can add value or additional information to these evaluations. The scope of this project included evaluating two EC web sites, Kalahari.net and Amazon.com that falls under the category of B2C category. Each web site was evaluated by novice and expert users utilising traditional usability evaluation techniques in order to identify usability issues/ problems. In conjunction to usability evaluation, eye tracking evaluation was conducted on these selected web sites (during the traditional usability evaluation) in order to investigate if eye tracking evaluations could contribute to usability evaluations.

The aim of this research is thus to investigate how eye tracking can provide additional information to web site developers when implementing EC applications. This paper discusses how usability evaluations are conducted. The paper will further discuss the problem the research aims to address, the literature reviewed and methodology that was

followed. The pilot study and main study results are provided. Conclusions and managerial implications will conclude the discussion.

RESEARCH OBJECTIVES

The research objectives of this study were as follows:

- Selecting two EC web sites based on the required elements of EC web sites;
- Choose suitable methodology and usability testing techniques for usability evaluations of the EC web sites;
- Conduct usability tests on the selected EC web sites by novice and expert users;
- Incorporate eye tracking experiments on the same web sites to show the additional information eye tracking can provide during usability evaluations; and
- Combine traditional usability evaluation with eye tracking evaluations to indicate how the techniques complement each other.

RESEARCH METHODOLOGY

The research methodology followed was a case study approach (Saunders, Lewis and Thornhill, 2009). Two web sites, Kalahari.net and Amazon.com were evaluated using a usability analysis and questionnaire and additionally eye tracking by novice and expert users. A detailed literature study was conducted on EC web sites, Internet user expectations, web site user interactions, web site usability and usability guidelines and the use of eye tracking in web site user evaluations.

The two web sites, Kalahari.net and Amazon.com were evaluated using a usability questionnaire and eye tracking by novice and expert users. A usability evaluation methodology was followed and users completed four tasks on each of the two web sites (Pretorius, 2005). The Tobii T60 eye tracker (Tobii, 2010) in the Nelson Mandela Metropolitan University (NMMU) usability laboratory was used for all eye tracking evaluations. Nielsen (1994) states that 8-10 users are sufficient for a usability evaluation and that a great number of participants does not really provide significantly more information. A pilot study (n=3) was conducted followed by a main study (n=10). The data collected were as follows:

- A Pre-test questionnaire that captured the participant's details and their online shopping experience;
- Eye tracking evaluations of users using the web sites, recorded in data files for each participant;

- Video recording of both the participants' eye movement (using the eye tracker) and facial expressions (using the web cam or built in camera of the eye tracker which is non obtrusive to the user);
- An interview afterwards to provide a cognitive walkthrough of tasks completed; and
- Post-test questionnaires to obtain feedback from the users.

The usability metrics used in this research were chosen based on their relevance to EC web sites. The usability metrics that are of importance are: Efficiency (Task Completion time), Effectiveness (Task performance rate), self reported metrics like satisfaction and Trust. The important metric, trust, is not measured during this research study as it is beyond the scope of this research.

The key eye tracking measurements used were:

- *Number of fixations*: The number of fixations is negatively correlated with search efficiency. Many fixations may indicate less efficient searching, which may be a result of poor arrangement of display elements (Tzanidou, 2003);
- *Gaze percentage*: This indicates the proportion of time on each Area of Interest (AOI). The gaze percentage of a particular display element could indicate the importance or complexity of that element (Tzanidou, 2003); and
- *Scan path*: Also known as the sequential analysis of fixations is composed of fixations and saccades (Tzanidou, 2003; Tzanidou, Minocha and Petre, 2005). This metric studies the transition probability between AOIs and provides an indication of where users look first at the interface in what order (Tzanidou, 2003). It provides an understanding of how the user visually structures information across a screen (Tzanidou, *et al.*, 2005).

THE PILOT STUDY

A pilot study is recommended to be conducted to test the equipment, materials, tasks, etc. (Pretorius, 2005). A pilot study allows researchers to implement changes to the experimental design. All the changes made to task lists, questionnaires, etc. must be documented. A convenient sample was chosen for the pilot study and consisted of two males and one female. The ages range from 22 to 25 and they were students at NMMU and were novice users when shopping online (Table 1).

Participant	Gender	Computer experience(years)	Online shopping experience
ID1	Female	3-5	Novice
ID2	Male	3-5	Novice
ID3	Male	1	Novice

Table 1: The pilot study (n=3).

The researchers followed the protocol suggested by Pretorius (2005). Participants were required to complete a consent form, background questionnaire, complete tasks provided in the pilot study task list and complete the post test questionnaire. The results indicated that the users prefer expressing themselves verbally rather than in writing, indicating the importance of an informal debriefing or interview when conducting usability and eye tracking tests. In the case that participants are shy or reluctant to speak, the open ended questions in the post-test questionnaire are sufficient.

The eye tracker provides a video of all the actions (key presses, scrolling, etc.) the participant conducts. Additionally the eye tracker also provides the observer with information like success rate, errors, and completion times in a form of a screen recording. The pilot study ruled out a number of ambiguous statements in the task list. Users did not fully understand what was required of them and the task list was updated.

THE MAIN STUDY AND RESULTS

Improvements were made based on the pilot study for the experiment design in the main study. The post-test questionnaires completed by users in the main study were statistically analysed. The main purpose of this usability evaluation is to discover usability problems. Participants of a usability study should be representative of the larger population that is the target audience (Tullis and Albert, 2008). Other issue that influence the selection of participants include availability, cost, appropriateness, etc. The greatest factors that played a part in this study were appropriateness and availability.

The convenience sample of users utilised in this study were between the ages of 21 and 60, owned a credit card, were employed and had at least the basic computer skills and experience to exploit the web. The users were all NMMU administrative staff. Nielsen (2008) indicated that a sample size of 8 users is appropriate for usability analysis and a small sample size of 10 users was used in this study, where 50 percent were males and 50 percent were females. Table 2 summarises the population of main experiments conducted for this research.

Participant	Gender	Online shopping experience
P1	Female	Novice
P2	Female	Expert
P3	Female	Expert
P4	Male	Expert
P5	Female	Expert
P6	Male	Expert
P7	Male	Expert
P8	Female	Novice
P9	Male	Novice
P10	Male	Expert

Table 2: Population of main study

The data captured were obtained from pre- and post-test questionnaires and were completed by the participants. The eye tracker provided screen recordings of what each participant did during the test and where each participant was looking on the screen. The eye tracker provides additional data such as task times and completion rates that are common usability metrics. Additionally the eye tracker recorded all facial expressions the participant made during their tests. The videos can give observers an indication of how the users were feeling during the test.

The post-test questionnaire used in this study used a five point Lickert scale where a response of one (1) indicated that the participant strongly disagreed and five (5) indicates that the participant strongly agreed with a statement. The questions in the questionnaire were categorised in the four categories according to the usability metrics that are important in a usability test of web sites (Table 3).

Table 3 contains data for Kalahari.net (indicated with a **K**) and Amazon.com (indicated with an **A**). The blue cells show the overall rating for each category and each web site. Kalahari has the higher rating in all categories. This means on average the users preferred the Kalahari.net web site, for it was the most satisfying compared to Amazon.com.

Statement/ question	Median		Mean		Stdev	
	K	A	K	A	K	A
Satisfaction						
1.1 The interface of this web site is pleasant.	3.5	3	3.4	3	0.97	1.25
1.2 Overall, I am satisfied with this system.	4	3	3.6	2.6	1.07	1.26

Over all satisfaction			3.5	2.8		
Ease of use						
1.3 Overall, I am satisfied with how easy it is to use this system.	3.5	3	3.6	2.8	0.97	1.32
1.4 It was simple to use this web site.	4	3	3.8	2.8	0.92	1.32
1.5 I feel comfortable using this web site.	3	3	3.2	2.9	1.32	1.29
Overall ease of use			3.5	2.8		
Ease of learning						
1.6 It was easy to learn to use this web site.	4	3	3.5	2.9	1.27	1.45
Effectiveness						
1.7 I can effectively complete the tasks using this web site.	3.5	3	3.6	3	0.97	1.33
1.8 The information is effective in helping me to complete the tasks.	3.5	3	3.4	2.6	1.17	1.26
Overall effectiveness			3.5	2.8		
Efficiency						
1.9 I can efficiently complete the tasks using this web site.	3	2.5	3.3	2.7	1.16	1.49
1.10 I believe I became productive quickly using this web site.	3	3	3.2	2.7	1.32	1.25
1.11 Whenever I make a mistake using this web site, I recover easily and quickly.	3	2.5	3	2.4	1.05	0.97
1.12 The web site gives error messages that clearly tell me how to fix problems.	2.5	2	2.5	2	1.35	0.94
1.13 I am able to complete the tasks quickly using this web site.	3	2.5	3.3	2.6	1.25	1.43
Overall efficiency			3.06	2.48		

Table 3: Post test questionnaire results (**K**=Kalahari.net, **A**=Amazon.com)

The following section will discuss the usability analysis and eye tracking analysis for each of the web sites. The four tasks users were required to perform are discussed and usability and eye tracking analysis and results provided. Usability issue identified by the users will be analysed and the eye tracking metrics will further analyse each task. Novice and expert user results will only be provided where the authors found significant differences in user performances.

Usability and eye tracking evaluation of user tasks

Pretorius (2005) proposed a usability evolution methodology for web site evaluations by novice and expert users. Pretorius (2005) further compiled task list that Internet users could follow in order for usability researchers to conduct usability evaluations and eye tracking experiments. The authors utilised four tasks in this research study.

Task 1 was performed on Amazon.com. It required the users to search for a series of books and choose a specific one from the list. Users were requested to specifically use the search tool on the web site to locate the books. Once the books were found, users were required to do a manual, linear search within the search results. Users were also required to write down the cost of the cheapest, paperback book.

Table 4 summarises the performance data for task 1. The column named Completion in the table indicates whether a participant has completed the task correctly. A zero (0) indicates that the task was not completed correctly and a one (1) indicates that the task was completed correctly. The task completion times are indicated in seconds. Three of the tasks on the task list required users to answer a question. The question is based on the task they just completed and the answer is located on the current page (if they completed the task correctly). The score column indicate the score (correct answers) each participants got for the specific task.

Task 1			
Participants	Completion	Task time in Sec	Score
P1	0	144	1/1
P2	0	282	1/1
P3	1	240	1/1
P4	1	300	1/1
P5	1	302	1/1
P6	1	65	1/1
P7	1	120	0/1
P8	1	237	1/1
P9	0	215	1/1
P10	1	125	1/1
Mean	70%	203	90%
Median		226	
Stdev		84.07536302	

Table 4: Performance data of Task 1.

The *Usability issues identified for task 1* were that users did not always know the contents of their shopping baskets. Users were trying to answer the question: “*What does the item cost that was just added?*” and found it difficult to locate this information. Eye tracking results displayed in Figure 1 provides an example of a user who did not notice the information (content of shopping basket) on the right hand side of screen. Most of the users’ attention was directed at the top middle section of the screen, where it may have seemed the item’s costs would be indicated. The top middle section indicated a subtotal of \$19.98 and the user assumed that this is the cost of the item just added to the basket. The user not noticing the actual content of basket on the right, the user could not have noticed that they made a mistake by adding the item twice, resulting in an incorrect response to the question asked in this task.

The eye tracking results indicated Amazon.com should display the contents of the shopping basket at all times. The paradigm of a shopping list or a shopping slip could be used.

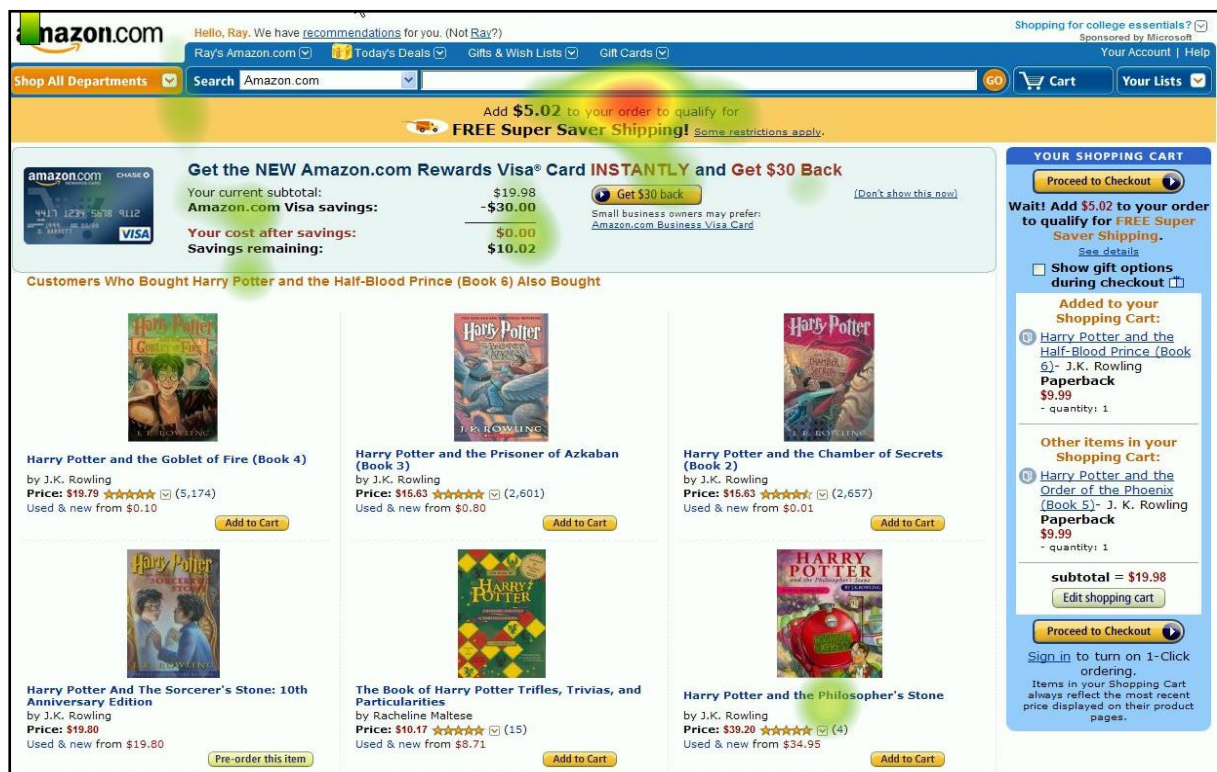


Figure 1: Heat map-Searching for shopping basket content.

A number of users made the mistake of adding an item twice. Users who noticed that they added the item twice, tried to correct this mistake by editing the shopping basket. In correcting this mistake, the users edited the shopping basket. In Figure 2 the Areas of Interest (AOI) are illustrated.

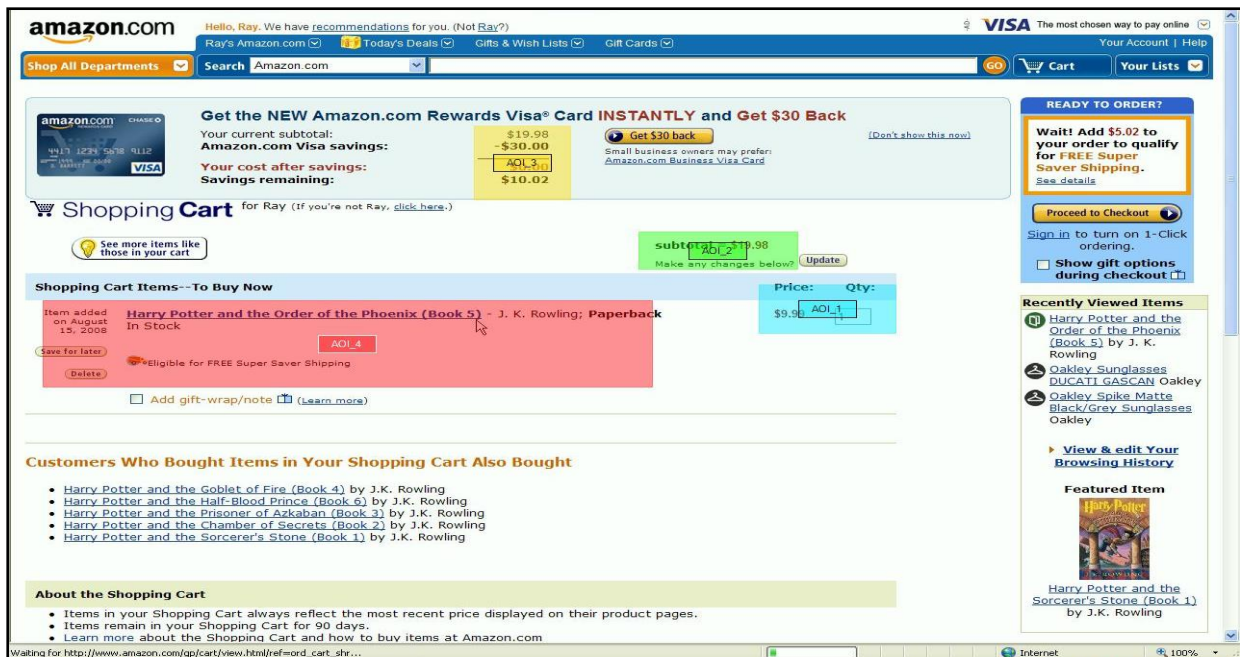


Figure 2: Areas of interest (AOI).

Task 2 required users to search for a pair of Oakley sunglasses and add it to the shopping cart on the Amazon.com web site. This search was not as straight forward as the previous search in task 1. Users were required to search for the appropriate department before actually locating the item. The correct department for sunglasses is Apparel, shoes and accessories. Once users located the sunglasses, they were required to add it to the shopping basket, check out (not actually completing the transaction though) and write down the final amount due.

Task 2			
Participants	Completion	Task time in Sec	Score
P1	0	142	1/1
P2	0	260	1/1
P3	1	540	1/1
P4	1	240	1/1
P5	1	240	1/1
P6	1	180	1/1
P7	1	186	0/1
P8	0	208	1/1
P9	0	302	1/1
P10	0	122	1/1
Mean	50%	242	90%
Median		224	
Stdev		117.9792826	

Table 5: Performance data of task 2.

The usability performance data for task 2 are presented in Table 5. Locating the particular department (Apparel, Shoes and Jewellery: Figure 3) was a difficult mission for some of the users. The name of the department is complex (naming three categories). Some users noticed that these three categories are also found separately under the search options and this lead to inconsistencies and confused users. The confusions were identified in the debriefing sessions.

The usability evaluations recommended that EC web sites should avoid using complex menu labels. They should use every day language that describes the category and its contents/products.



Figure 3: Extracted menu.

The eye tracking results for task 2 shows a user's quest for finding the Apparel department. The gaze plot (Figure 4) provides the sequence the user chose to search for particular information. The heat map (Figure 5) provides an overall view of where the user focussed their eyes. Most of the user's attention was focussed on the advertising section of the page.

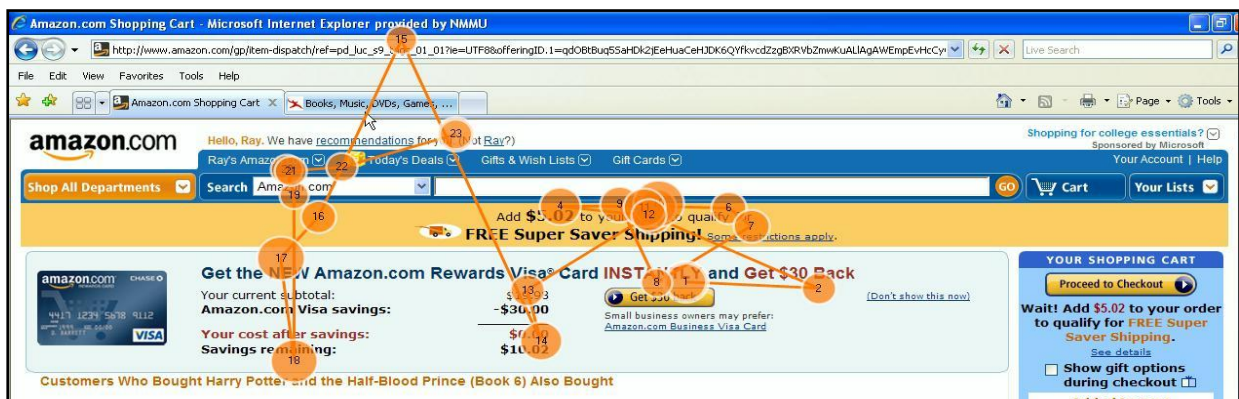


Figure 4: Gaze plot for task 2 - Searching for Apparel department.

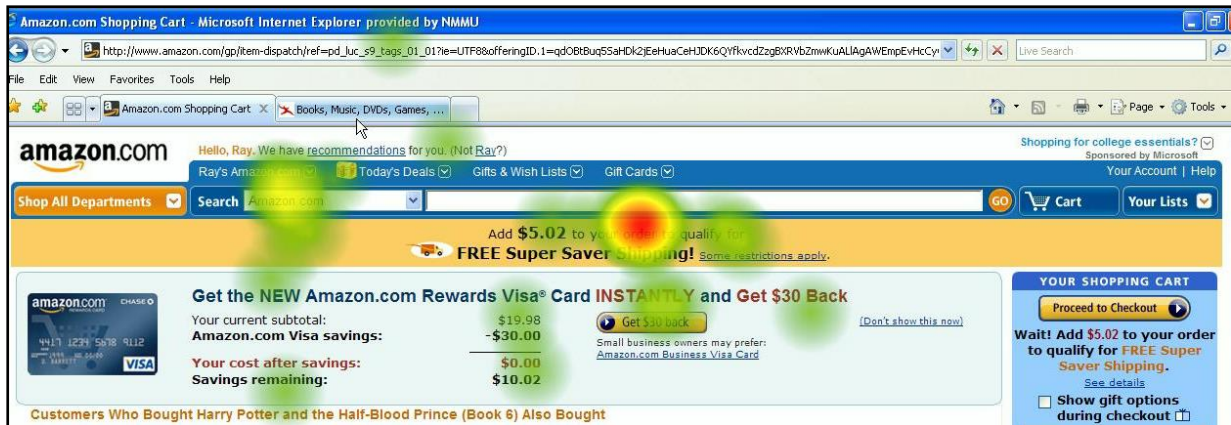


Figure 5: Heat map for task 2 - Searching for Apparel department.

Task 3		
Participants	Completion	Task time in Sec
P1	1	69
P2	1	180
P3	1	113
P4	1	62
P5	1	60
P6	1	60
P7	0	103
P8	0	142
P9	0	144
P10	1	54
Mean	70%	98.7
Median		86
Stdev		44.69911757

Table 6: Performance data for task 3.

Tasks 3 and 4 were completed on Kalahari.net. Task 3 required users to search for a DVD with a specific title and add it to the shopping basket. Users were required to search under the DVD department for this title which seemed straight forward to most participants because the menu or link bar was visible at all times (similar comments obtained from post interviews).

The usability performance data of task 3 is recorded in Table 6. The table illustrates that 70 percent of all participants completed this task. This task also had, on average, the “best” (smallest) task time of all tasks performed in this usability study. The home page had a large number of advertisements as seen in Figure 6. The heat map illustrates that the particular novice participant was not disturbed by the fact that the page had so many advertisements. The participant was goal orientated and focussed their attention at the menu structure almost immediately.

Contradictory to this trend amongst novice users, the experts explored the web page in more detail (Figure 7). This difference could be due to fact that experts are comfortable in browsing a page before finishing a task. The heat map shows expert users showing more fixations over the whole page (Figure 7) rather than that of the novice users showing only fixations over the link bars at the top of page and on the left of the page (Figure 6). *The eye tracking results indicate that EC web sites should limit the use of advertisements in order not to confuse and distract users.*



Figure 6: Heat map of Kalahari.net home page (Novice users).

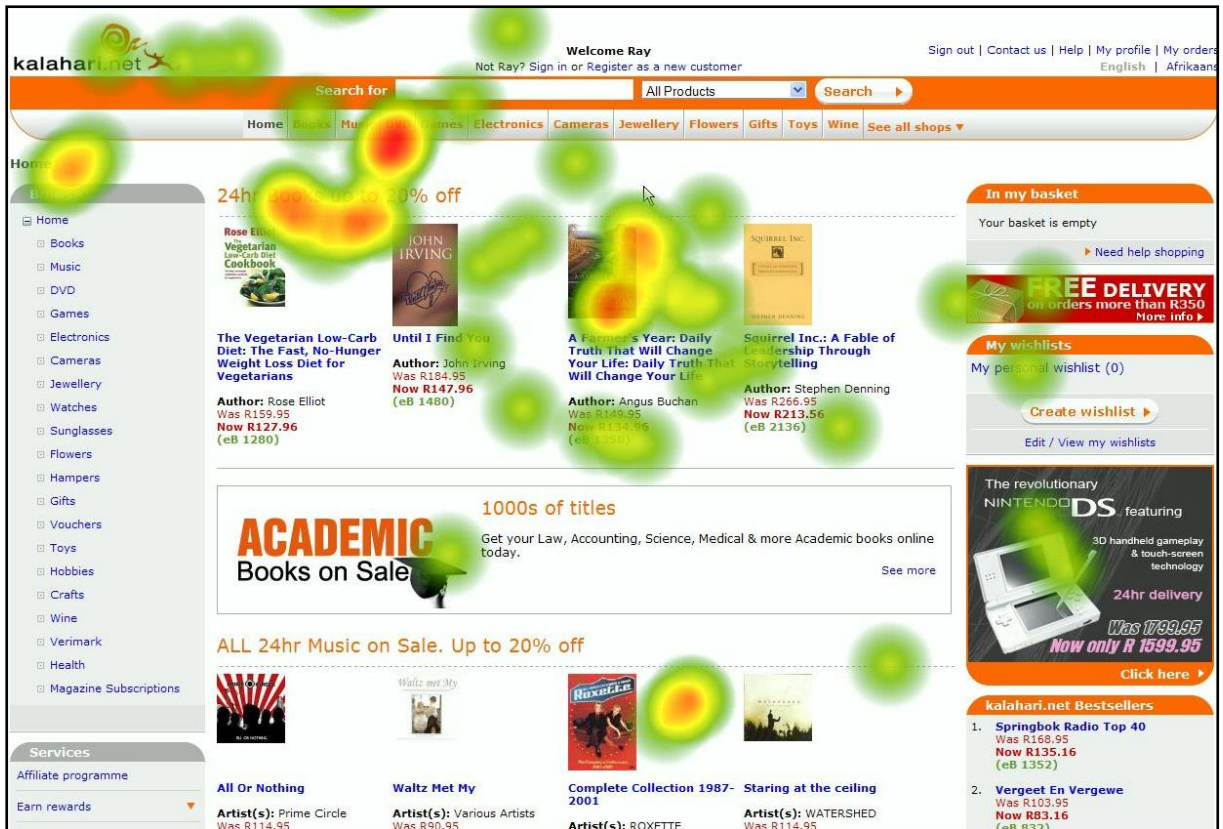


Figure 7: Heat map for Kalahari.net home page (Expert).

The eye tracking results showed that two users completing task 3, could not find the DVD title and explored the web site in search for the required DVD. The two participants could not find the DVD because the DVD was out of stock (Figure 8). The problem with the web site is that no feedback is given to the user to inform him/her that this DVD is out of stock. Instead a different screen is shown because of the common actress that stars in the movie. *The eye tracking results indicate that the web site should provide the user with correct information i.e. the item is out of stock.*

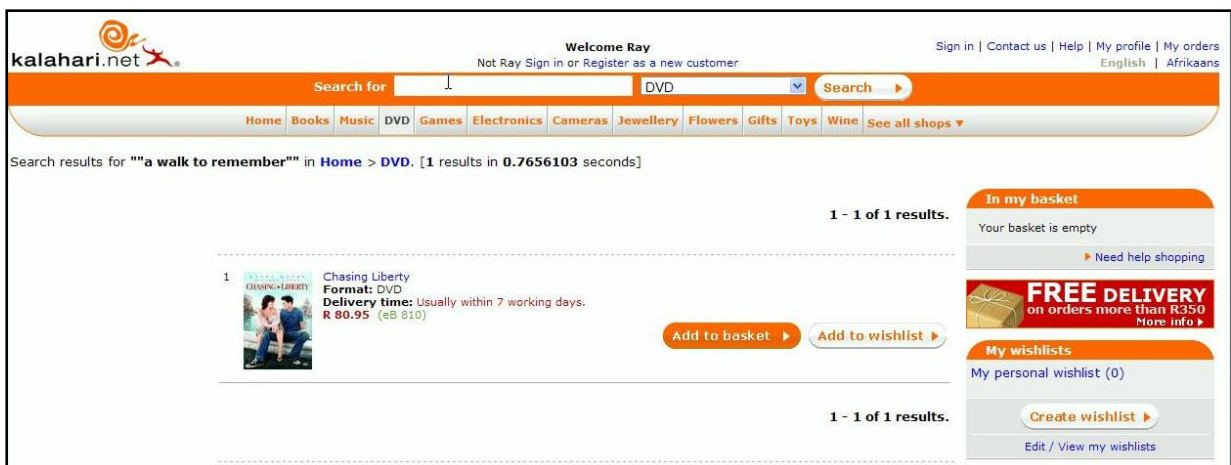


Figure 8: Search result displays incorrect DVD information.



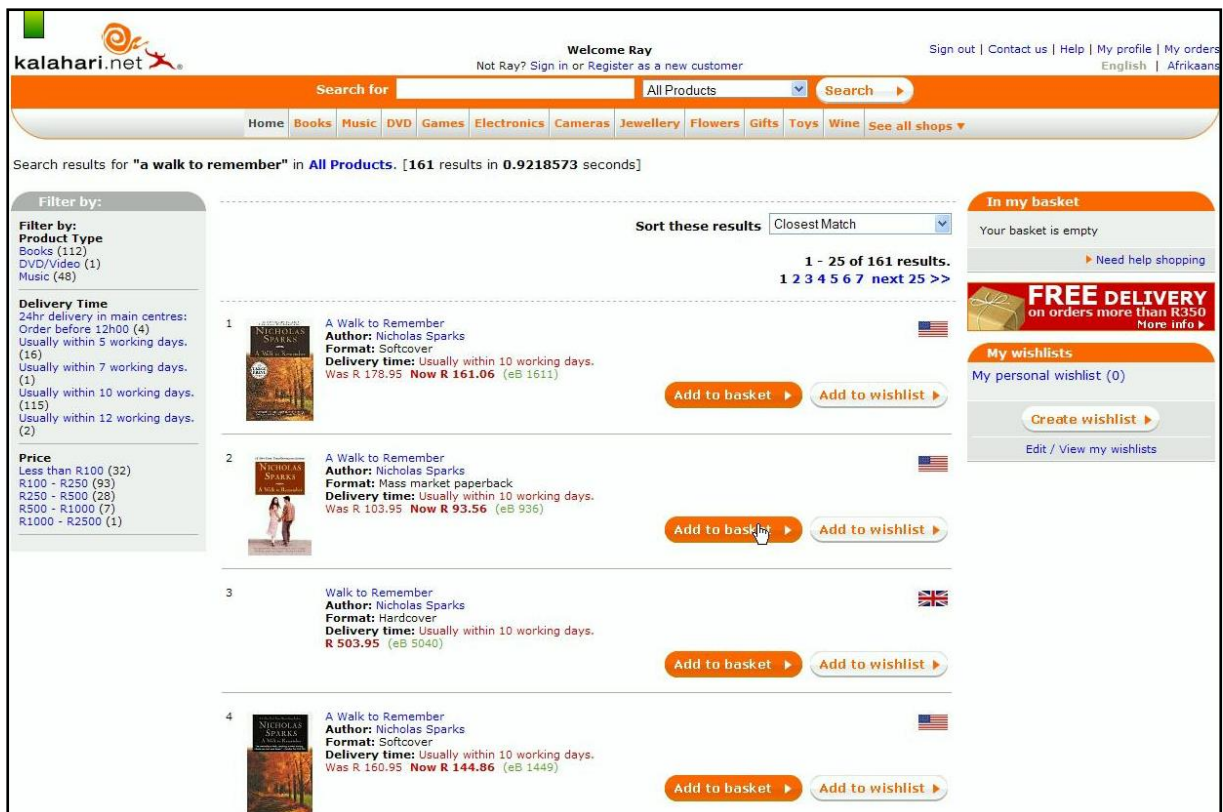


Figure 9: Incorrect selection.

Users were required to add a DVD to the shopping cart in task 3. The particular user (Figure 9) did not specify the search category (should be DVD-indicated by black arrow) and thus received and added the wrong item to the shopping cart, thus leading to task failure. The results obtained were books instead of DVDs. Figure 10 shows that the user did read the information provided (see black arrow in Figure 10). Clearly the information was not sufficient. Nowhere on the page does it indicate that the current items on the page are books. Users had to assume that items were books. *The eye tracking results indicate that the user should be provided with the option to find more information about items on the product pages.*



Figure 10: Heat map for incorrect selection (a).

Task 4 required users to search for sunglasses under the department named sunglasses on the Kalahari.net web site. Users were instructed to enter the name of the glasses incorrectly and examine the results of the search. Users were required to note the number items found. Users then corrected the deliberate mistake and entered the correct spelling and repeated the search. Once the correct pair of sunglasses were added to the shopping basket, users were required to note the final amount due.

The performance data of the usability results for task 4 are presented in Table 7 and indicates a 70 percent completion rate. The usability results (Figure 11) indicated that users did not relate the search results statistics (indicated by the red arrow) to the actual search results (indicated by a green arrow) and users were not sure if the search results and the statistics were actually related. This information was obtained during the debriefing and interviews at the end of the evaluation.

Task 4			
Participants	Completion	Task time in Sec	Score
P1	1	144	3/3
P2	1	360	2/3
P3	1	309	2/3
P4	1	12	3/3
P5	0	180	2/3

P6	1	63	3/3
P7	1	307	3/3
P8	0	189	2/3
P9	0	148	1/3
P10	1	148	2/3
Mean	70%	186	77%
Median		164	
Stdev		110.6285075	

Table 7: Performance data of Task 4.

The screenshot shows the Kalahari.net website interface. At the top, there is a search bar with 'Sunglasses' entered and a search button. Below the search bar is a navigation menu with categories like Home, Books, Music, DVD, Games, Electronics, Cameras, Jewellery, Flowers, Gifts, Toys, Wine, and See all shops. The main content area displays search results for 'oakley' in 'Home > Sunglasses', showing 96 results in 0.9062442 seconds. On the left, there are filter options for Category (Black, Brown), Delivery Time, and Price. The product list includes five items: Oakley (Spike), Oakley (Fives), Oakley (Gascan), Oakley (Canteen), and Oakley (Oildrum). On the right, there are sections for 'In my basket' (empty) and 'My wishlists' (0 items). A red arrow points to the search results header, and a green arrow points to the product list.

Figure 11: Kalahari search results page.

Comparison of novice and expert users

Padilla (2003) indicated that novice and expert users have different methods of selecting the correct menu items and that expert users typically know the menu item they want to select and are able to memorise the location of menu items. Expert users generally tend to make faster menu selections (Padilla, 2003). Contrasting to expert users, novices do generally not know what menu item they want to select or its location and tend to have to search for it.

Table 8 and Figure 12 shows that experts had a greater task time in task 1 and task 2 which was done on the Amazon.com web site. This means that experts used more time to complete or attempt to do the tasks on the Amazon.com site. The opposite seem to reflect in task 3 and task 4. Experts took less time complete the tasks on the Kalahari.net site. A more significant finding could be that overall (both expert and novice) the Tasks on Kalahari.net (task 3 and task 4) has a smaller task time than Amazon.com (task 1 and task 2).

	Expert Mean	Novice Mean
Task 1	219	179
Task 2	263.67	209.5
Task 3	88.17	114.5
Task 4	178.67	197

Table 8: Novice and expert task times in seconds.

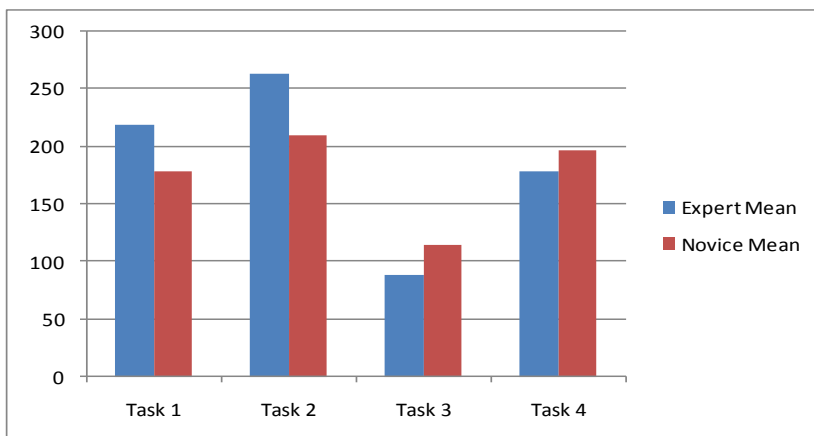


Figure 12: Novice and expert task times.

The usability data obtained for novice and expert users shows that Kalahari.net has a better task time than Amazon.com. The data further shows that novice users performed better in the tasks performed on Amazon.com. The comments made in the post interviews by the three expert participants included the following: “I normally purchase items from Kalahari.net”, “I prefer local web sites with South African English.”, “Amazon provides too many search results- they need to provide specific and relevant results to the searches.” and “I’m too use to Kalahari.net.”

The Novice and expert self reported metrics (Table 9) shows that experts (78.97 percent) had a better experience than the novice (48.46 percent) users on the Kalahari.net web site. On the other hand, novice (64.62 percent) users had a better experience on the Amazon.com web site than the expert (46.15 percent) users. This seems to correlate with the task time analysis provided in the previous section. On average both the novice and

expert had a better experience on the Kalahari.net (63.71 percent) web site than the Amazon.com (55.38 percent) web site.

	Novice Mean	Expert Mean	Mean
Kalahari	48.46%	78.97%	63.72%
Amazon	64.62%	46.15%	55.38%
Mean	56.54%	62.56%	

Table 9: Novice and expert self reported metrics.

The eye tracking results (Figure 13 and Figure 14) shows an expert and novice user interacting with the Kalahari.net web site. The expert, although had more fixations than the novice, was more goal oriented by reading the error message and going back to edit shopping basket items (obtained from screen recordings of the eye tracker). The novice user was consulting the “Help” section of the page but did not even read the error message.

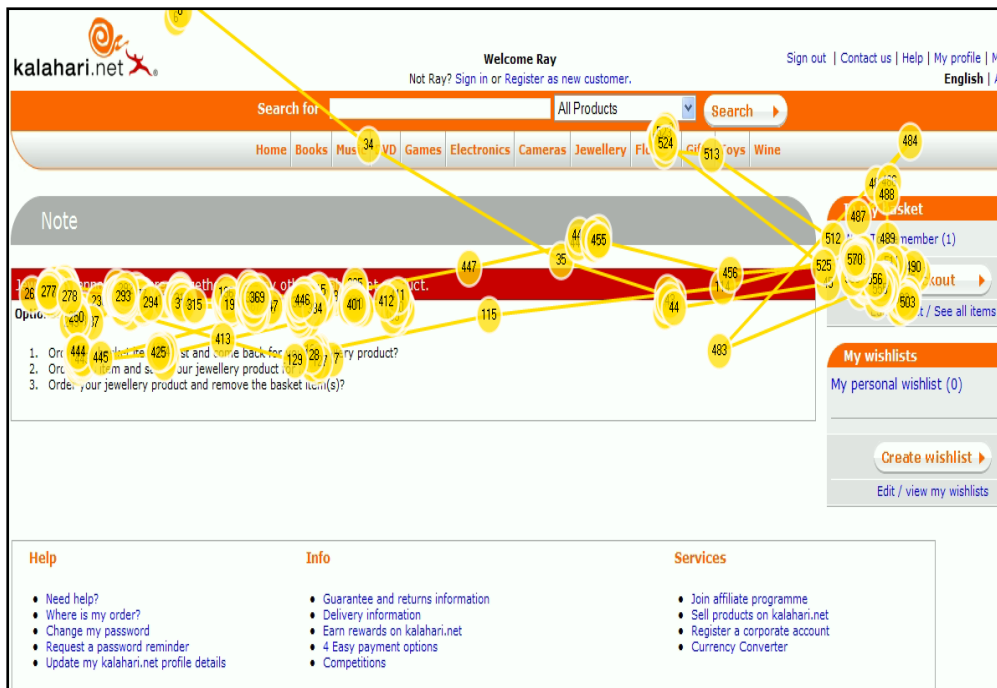


Figure 13: Gaze plot of an expert user on Kalahari.net

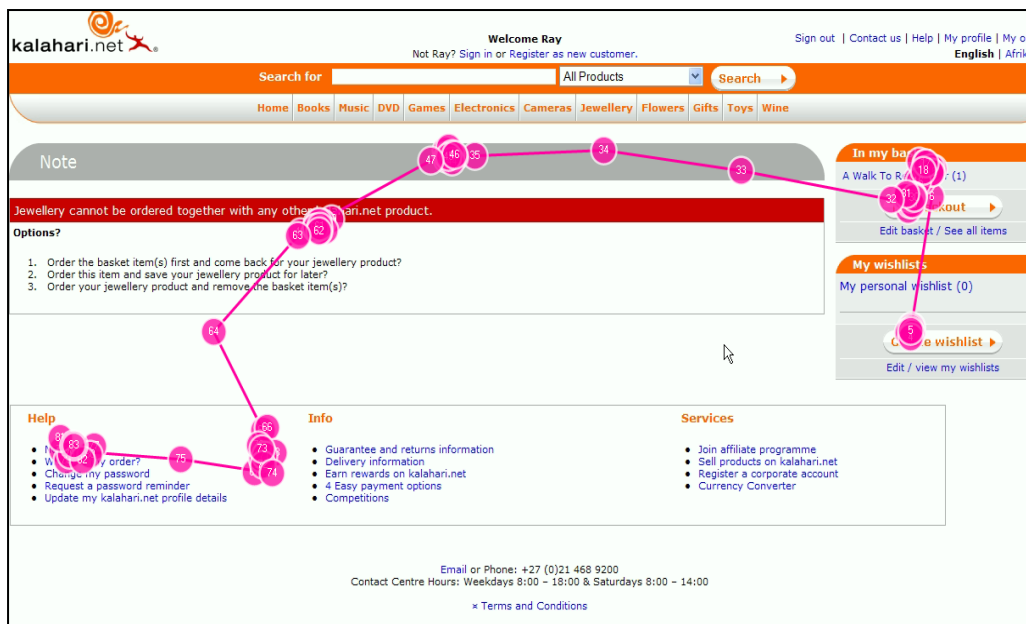


Figure 14: Gaze plot of novice user on Kalahari.net.

CONCLUSION AND FUTURE RESEARCH

The quality of a web site determines the business benefits (Nielsen, 2008) and a measure of a web site's usability indicates the strengths and weaknesses of the web site (Chang, 2007). The objective of this research study was to indicate the value of eye tracking in the usability analysis of EC web sites. A key factor in usability analysis is to understand the user's needs and goals. The goals for EC web sites should include: Do users feel safe using this web site? Do users feel well informed about the products on this web site? Do new users find it easy to learn the web site structure (navigation) and/or purchase procedure?

Van Biljon and Pretorius (2009) found that novice and expert user experience has an influence on a participant's performance and behaviour. This study, using usability analysis and eye tracking, found that novice and expert users' interaction with two EC web sites differed and that each group performed differently. The research findings further supported the findings of Martim, *et al.* (2009) in that SA retail companies must be aware of web site usability issues and improve web site navigation and make error messages useful, clear, visible and explicit.

Companies conducting business on the Internet should take cognisance of the findings and note that novice and expert users have different expectations, user interface interaction requirements and user interface expectations. The research findings of this study indicated that expert users were more goal oriented by reading error messages and going back to edit shopping basket items (obtained from screen recordings of the eye tracker). The novice user was consulting the "Help" section of the page but did not read the error messages. The

findings indicate that managers must ensure that a company's web sites must cater for these differences and provide the relevant usability support.

Future research will involve the development and evaluation of web sites that the authors could modify in order to determine if the recommended changes were applicable and relevant. An increasing number of users are accessing web sites using mobile technologies. Research is presently being conducted on mobile user interfaces and user expectations when interacting with web sites.

MANAGERIAL IMPLICATIONS

New technologies and web site usability guidelines are constantly being developed to improve web site usability evaluations. Companies must not assume that all users interacting with the business web site experience the same usability concerns. Related studies (Martim, *et al.* 2009; van Biljon and Pretorius, 2009) and this research study highlighted the differences between novice and expert users. In South Africa, management must further be aware of disadvantaged population groups gaining access to the Internet and experiencing difficulties with computer user interfaces, usability issues and novice and expert user expectations.

Management must insist that regular usability analysis be conducted on the company's web site and further consider evaluating the web site using eye tracking technologies. Usability guidelines must be followed when designing web sites and management must be aware on different user interface requirements of novice and expert users.

The research evaluated two popular web sites making use of a standard usability evaluation methodology and additionally using sophisticated eye tracking technologies. Managers of businesses presently conducting business on the Internet must realise the importance of usability evaluations of web sites and the added value of eye tracking evaluations. Managers may assume that the company's EC web site is usable and that the user's interaction with the web site is satisfactory, may find that the usability evaluation and specifically the eye tracking evaluation may reveal significant flaws in the usage of the EC web site by novice and expert users.

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**The Relationship Between SMEs And Insurance Companies From An SME
Perspective: The case of SMEs in Nelson Mandela Metropolitan Area.**

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Small Business, Insurance, Risk Management and Relationship

ABSTRACT

In these tough times, Small and Medium Enterprises (SMEs) need to find support from the industries that can assist them in achieving growth and sustainability. Building relationships with insurance companies is one way for SMEs to secure their investments. In the event of a crisis, SMEs need to be prepared so that their businesses are not permanently affected. It is important that they survive such incidences. Risk exists, and there is need for SMEs owners or managers to protect their businesses. In August 2006, flood damage to small businesses and residential premises in the Nelson Mandela Metropolitan Area was estimated at R120million (SABC News 2006). There is a need for a business relationship between the insurance companies and SMEs for SMEs owners to be able to protect their businesses. The aim of this research is to show how important such a relationship is from an SME perspective.

INTRODUCTION

SMEs play an important role as both employers and major players in the economic growth of South Africa. They provide more than 55% of total employment and contribute 22% of the Gross Domestic Product (African Development Bank 2005). The needs of the SMEs sector should be clearly identified and linked with a better understanding of the scale of the enterprise sector and its role in national development (Daniels 1998). Being in business in today's tough environment is hard work, with the business person having to keep a close eye on many parts of the business, from marketing to compliance issues up to cash flow (Manning 2002).

The SME owners need to be trained and acquire knowledge in order for them to be able to run their business in the most efficient manner. Most entrepreneurs often start a new enterprise ignorant of many key dimensions of running their enterprises and obtaining the necessary information if they are to survive (Shepard, Douglas and Shanley 2000). The key to a successful business is to plan by identifying future demands and expectations of customers, ensuring the product or service demanded is available when customers want it and that it satisfies their needs.

Most SME owners run their businesses for survival and they have growth as a long term goal, yet they are unable to reach this level due to poor planning. In order for them to achieve growth, they should guard themselves against any set backs that may hinder their progress. These include, unexpected occurrences of theft, breakages, fires, strikes, the death of the owner of the business and any other crises that may befall their business (Manning 2004).

The South African government has already set the foundation for the growth of SMEs. Thus, there is a need to look at other businesses that offer the SMEs support services such as insurance companies. The occurrence of natural disasters in most cases results in the loss of workers, along with key talent and organisational knowledge, from low morale, fear, physical relocation or death. The owners of SMEs need to develop recovery plans. These strategies should address the safety, health and welfare of employees before, during and after an emergency. Crisis preparedness, response and recovery are essential to help businesses begin to recover. This shows the importance of having an insurance cover in order for the business to recover from any disturbance (Manning 2004).

STATEMENT OF THE PROBLEM

Literature has shown that insurance companies are not willing to insure SMEs and it is the aim of this research to establish if a relationship between the two constructs exists. The assessment of the relationship between the two was measured from an SME perspective. In an article entitled *New Deal In The Offering for SMMEs*, the author stated that the insurance industry prefers to deal only with established businesses (Mthimkhulu 2008: 10).

Longenecker, Moore and Petty (2003:612) stipulate that short term insurance companies are not eager to insure SME enterprises and may even turn them down in some cases. Risk management is not something that requires immediate attention until something happens. A prudent small business owner will take the time to identify the different types of risks faced by the small enterprise and find ways to cope with them.

In this case, not all SME owners have the skill and time to look into risk management for their business. When a disaster occurs most businesses are unable to recover because there will be no or inadequate insurance cover to protect the business. The owner will be forced to close down their business and people are forced to give up their source of income and employment.

OBJECTIVES

Primary objective

- To investigate whether a relationship does exist between SMEs and insurance companies in the Nelson Mandela Metropolitan Area.

Secondary objectives

- To investigate whether having training about insurance has an effect on the relationship between SMEs and insurance brokers.
- To establish whether the relationship between SMEs and insurance companies is influenced by them being approached by insurance brokers.

HYPOTHESES

Primary hypothesis

- H_0 : There is a relationship between SMEs and insurance companies in the Nelson Mandela Metropolitan Area;
- H_1 : There is no relationship between SMEs and insurance companies in the Nelson Mandela Metropolitan Area.

Secondary hypotheses

- H_0 : Having training about insurance has an effect on the relationship between SMEs and insurance brokers;
- H_1 : Having training about insurance does not have an effect on the relationship between SMEs and insurance brokers.
- H_0 : SMEs who have been approached by insurance broker have a business relationship with insurance companies;
- H_2 : SMEs who have been approached by insurance broker do not have a business relationship with insurance companies.

LITERATURE REVIEW

Most research is directed at large corporations that have different resources and needs to SMEs. Research by Pretty (cited by Strutt 1998: 8), examined the purchase of insurance by large corporations and the benefit of the insurance program in the event of a large insurable event. The research found that as corporations increased the diversity of their products and their geographical spread of assets, they placed greater reliance on natural operating hedging, rather than transferring the risk to an insurer. This willingness to accept more of the risk themselves was found to be based on the level of diversification rather than on the actual size of the firm. The limitation of the research was that it concentrated solely on the large firms and its relevance to SMEs was not addressed (Strutt 1998: 10).

Recent research has been conducted into the business protection market. The aim was to look into what the level of insurance businesses hold, what types of insurance they believe

are important and what insurable risk would have the largest impact on their business, should it occur. The findings from the research highlighted the need for protection whatever type of business (Manning 2004). Business relationships are valuable long-term assets of a company. It is necessary to invest in such relationships and to manage this investment to ensure their repeat business (Claro 2004).

There is a need for a business relationship between SMEs and insurance companies, as a relationship of that nature can be beneficial for both parties involved. In business-to-business relationships, firms usually customise products and services more than in business to customer relationships (Claro 2004). For that reason, prices are seldom standardised, and calculated for each customer individually. In this case, Ryals (2006: 101-113), recommends the value based pricing model. This means that the price a service provider charges a customer should reflect the value a customer sees the product or services that they get. As a precondition, a company needs deep insight into and detailed knowledge of the perceived value of each customer. The success of a business relationship lies in the development and the growth of trust and commitment amongst partners (Brink and Berndt 2004:30). If there is a relationship that is created between short term insurance companies and SMEs, it will be easier for insurance companies to establish the insurance policy needs of SMEs.

SMEs are often the vehicle by which the lowest income people in South Africa gain access to economic opportunities. This is at a time that distribution of income and wealth in South Africa is amongst the most unequal in the world. In South Africa, as in many developing and semi-industrialised countries, the main problem experienced by owners or operators of SMEs, is the difficulty in accessing the necessary support from service providers. Thus, it is imperative that significant investment (in terms of support from service providers) is made in SMEs in order to create both short term and long-term capacity for labour absorption, as well as to improve the income generation and redistribution (Ntsika 2002:11).

The success of the SMEs sector depends upon the establishment of a relationship between SMEs and insurance companies. In the event that an SME faces a catastrophe like a fire, strike or that its employees are injured at work, they need to have insurance to cover such eventualities as such disasters may leave them vulnerable if they do not have insurance. There is need to define the two constructs namely SMEs and insurance companies in order to have a clear understanding of the two variables that are the main components in this research.

Despite their importance, SMEs do not have a universally acceptable definition. The most widely used framework in South Africa is the definition of the National Small Business Act of 1996. Cronje, Du Toit and Motlatla (2003:493), observes that it is difficult to give a universally accepted definition of SMEs. However, some important characteristics of SMEs are identifiable.

The study at hand will be using the definition, as classified by the National Small Business Act of 1996 it defines small businesses as, “A separate distinct business entity, managed by one owner or more and which can be classified as a micro, very small, a small or medium enterprises by satisfying the criteria.” These include cooperative enterprises and non-governmental organisations, as well as branches or subsidiaries if any (Rwigema and Venter 2004:314). In general, while differences exist among sectors or sub sectors, the Act provides the following general classifications for SMEs in South Africa:

- Businesses with fewer than 200 employees, with an annual turnover less than R40 million and gross asset value of less than R18 million are medium enterprises;
- Businesses with less than 50 employees, with less than R25 million in total annual turnover and less than R4 million gross asset value is small enterprise;
- Businesses belonging to the “very small” category are those with less than 10 employees, with less than R4 million annual turnover and less than R1.8 million gross asset value;
- Lastly, businesses with less than five employees, with less than R15 million annual turnover and less than R10 million asset value are regarded as micro.

Having defined SMEs it is equally important to get a perspective on the South African insurance industry. Insurance represents an important method of meeting the financial consequences of risk. It has been traditionally defined as the business of transforming event (insurable) risks by means of two-party contract. Insurance provides a mechanism for the transfer of the cost of risk rather than the transfer of risk (Valsamakis, Vivian and Du Toit 2005:253).

Short term insurance is defined in the short- term insurance Act as providing benefits under short term policies which means engineering policies, guarantee policies, liability policies,

miscellaneous policies, motor policies, accident and health policies, property policies or transportation policies or a contract comprising a combination of these policies (Short-Term Insurance Act 1998).

Households and businesses buy insurance to transfer risk from themselves to the insurance company. The insurance company accepts the risk in return for a series of payments, called premiums. In the insurance industry, underwriting is the process used by insurance companies to determine whom to insure and what to charge. During a typical year, insurance companies collect more in premiums than they pay in claims. Insurance companies are a major source of short and long term financing for businesses (Boone and Kurtz 2003:561).

Insurance companies may be a good source of funds for a small firm especially real estate ventures. The business owner can go directly to the insurance company or contact its agent or a mortgage banker. While insurance companies have traditionally engaged in debt financing, they have more recently demanded that they be permitted to buy an equity share in the business as part of the total package (Megginson *et al.* 1997:12).

It is important that a definition of relationship building be discussed. The concept of relationship building emanated from the theory of relationship marketing. Trust is a major component of the relationship building process. Boone and Kurtz (2003:409) define relationship building as developing and maintaining long term, cost effective exchange relationships with individual customers, suppliers, employees, and other partners for mutual benefit. Relationship building involves the whole organisation and its stakeholders. At this point a definition of what a relationship entails is imperative for clear comprehension of the relationship building process.

In relationship marketing, the term relationship refers to voluntary repeat business between a supplier and a customer where the behaviour is planned, cooperative, intended to continue or mutual benefit and is perceived by both parties as a relationship. Using this approach means that repeat purchase through lack of alternative suppliers or the operation of loyalty schemes can not be defined as relationship marketing (Little and Marandi 2003:23).

RESEARCH METHODOLOGY

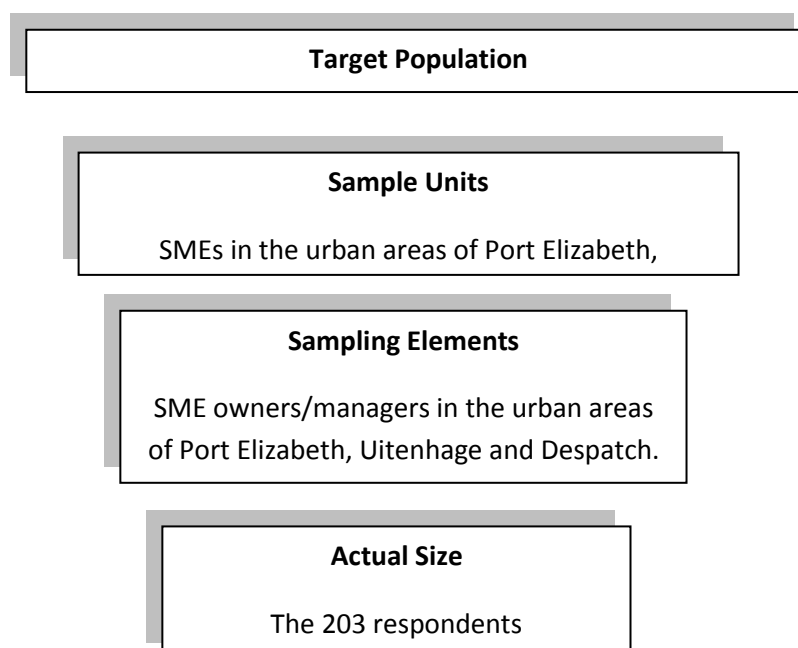
A research process involves the application of various methods and techniques in order to create scientifically obtained knowledge by using objective methods and procedures (Welman and Kruger 2001: 2). Mouton (2001: 56; De Vos 2002:137, point out that research

methodology can be defined as the process, instruments and procedures to be used in business research. A quantitative research method was used for the research study. Quantitative research is used to answer questions about relationships among variables with the purpose of explaining, predicting and controlling phenomena (Leedy and Ormrod 2001). Data was collected through a survey type structured questionnaire that was developed, pretested and validated. The questionnaire was administered to the owners or managers of SMEs in the Nelson Mandela Metropolitan Area.

Population and sample

The population is defined as a collection of all the observations of a random variable under study and about which one is trying to draw conclusions in practice. A population must be defined in very specific terms to include only those units with characteristics that are relevant to the problem (Wegner 2003:5). There is one population target for this current study, that is, SMEs in the Nelson Mandela Metropolitan Area. Zikmund (1997: 417) describes the target population as the complete group of specific population elements relevant to the research project. It is possible to construct a sampling frame, having defined the population. A sampling frame is a listing of all the elements in a population and the actual sample is then drawn from this listing. It is possible that biases could exist between the opinions of members of the sample frame and population. Therefore, the adequacy of the sampling frame is crucial in determining the quality of the sample drawn from it. The population and the sample for this study is illustrated below in figure 1.

Figure 1: Target population, sample units, sample elements and actual sample size for the study.



(Researcher's own construction)

Sampling technique

The sampling technique that was used was cluster sampling; it was most suitable for the current study because there was heterogeneity between subgroups and homogeneity within subgroups. The SMEs were divided into clusters according to the number of employees as this is consistent with the definition of SMEs which was used in this study. The different clusters had SMEs that had the same number of employees as one cluster, one cluster contained small businesses and the other had medium sized businesses as illustrated:

	Employees
Small	5 to 20
Medium	20 to 200

Source: Adapted from Zaayman (2003:16).

Sample size

The level of precision, or in other words, the level of sampling error one is willing to accept in a research influences the sample size. In reality the sample statistic is known but the population statistic is unknown, so, the difference between the sample and the population value can be assessed in terms of the likelihood that a sample value differs by a certain value from the population value (Leedy 2005:35). Cooper and Schindler (2003:190), recommend that since researchers can never be 100% certain that a sample reflects its population; they must decide how much precision they need and in making this decision.

It was estimated that there were approximately 2400 registered SMEs in the Nelson Mandela Metropolitan Area. According to the Rao-soft sample size calculator software, using 95% confidence interval with a margin of error of 5%, the sample size was 332 SMEs. There were only 203 respondents who gave back their questionnaires.

Data collection instruments

Self administered questionnaires were used by the researcher to collect data from the owners or managers of SMEs. It was estimated that there were approximately 2400 registered SMEs in the Nelson Mandela Metropolitan Area.

Data analysis procedure

The data was analysed by using Statistical Analysis System V8 (SA). The packages Statistica and SPSS were also used for the analysis of graphs. The statistical method which was used to analyse the data is Chi-Square test for independence.

Validity and Reliability

The validity and reliability of the questionnaires used to collect data was measured statistically using a number of statistical tests. To measure this, a Chi-square test and Cronbach's alpha was used to calculate approximate p-values. The Chi-square test is used to test if a sample of data came from a population with a specific distribution. In other words, it is used to examine the strength of the association between collected data and the specified distribution. The p-value is the probability of observing a Chi-square statistic at least as large as the one actually observed, given that there is no association between a variable of data occurring by chance (Investors words 2007).

DELIMITATION OF THE STUDY

The research excluded the workmen compensation insurance, unemployment insurance and life insurance. It only focused on short term insurance such as, vehicle / fleet, buildings, contents, electronic equipment, stock & money, public liability, personal accident, employee's liability, employee dishonesty, health and risk.

RESULTS

The statistical analyses conducted illustrate the extent to which the results yielded answers to the research objectives that underpin this study. The primary aim of the study was to establish whether there was a relationship between SMEs and insurance companies in the Nelson Mandela Metropolitan Area and to analyse the factors that influenced the business relationship between SMEs and insurance companies.

P-values

Hypotheses

p 0.00< 0.05	SMEs have a business relationship with insurance companies.
p 0.00<0.05	Having training about insurance has an effect on the relationship between SMEs and insurance brokers.
p 0.001<0.05	SMEs who have been approached by insurance broker have a business relationship with insurance companies

The first objective was to investigate whether a relationship between SMEs and Insurance companies exists. The following were the results of the analysis.

Business-to-business relationship between SMEs and insurance companies.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	146	71.9	78.1	78.1
	No	41	20.2	21.9	100.0
	Total	187	92.1	100.0	
Missing	System	16	7.9		
Total		203	100.0		

The study shows that 78.1% of the respondents have a business-to-business relationship with an insurance company. Whilst, 21.95% of the respondents did not have a relationship with an insurance company. Hence, the null hypothesis is **accepted** and the alternative hypothesis is rejected.

There is a relationship between SMEs and insurance companies in the Nelson Mandela Metropolitan Area

The second objective was to establish whether having training about insurance had an effect on the relationship between SMEs and insurance brokers. The results were as follows:

Table 1: Reliability analysis for questions on having insurance training and having a business-to-business relationship.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.698	.709	7

Having training, the factors influencing the purchase of an insurance policy and having a business-to-business relationship, all had high reliabilities, all Cronbach's $\alpha = .7$. A multiple

regression analysis³ as well as, Analysis of variance (ANOVA) was employed to test statistically, the significance of the null hypothesis.

Table 2: Multiple Regression Model for the effect of insurance training on business-to-business relationship.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.309 ^a	.095	.089	.385

a. Predictors: (Constant), Insurance training

The value of R² in Model one is .095, which shows that insurance training account for 9.5% of the variation in SMEs business-to-business relationship with insurance companies. The next table of analysis is the ANOVA.

Table 3: ANOVA results showing the effect of insurance training on business-to-business relationship.

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	2.201	1	2.201	14.839	.000 ^a
Residual	20.917	141	.148		
Total	23.119	142			

a. Predictors: (Constant), Insurance training

ANOVA aims to show whether the model, overall, results in a significantly good degree of prediction of the outcome variable (Field, 2009:208). When tested at 95% confidence interval and 5% margin of error, the results reported that insurance training has a significant effect on the business-to-business relationship between SMEs and insurance companies. This can be seen from a p-value of .000 in table 3, which indicates significance of the model.

Statistically, the alternative hypothesis is rejected and the null hypothesis is **accepted**. It is concluded that:

³ Multiple regression, is a technique employed to account for (predict) the variance in a dependent variable. It can establish that a set of independent variables explains a proportion of the variance in a dependent variable at a significant level (Garson, 2009).

The insurance training has an effect on the relationship between SMEs and insurance companies.

The last objective of this study was to establish whether the relationship between SMEs and insurance companies is influenced by them being approached by insurance brokers. The findings were as follows:

Table 4: ANOVA results showing how being approached by an insurance broker affects the business-to-business relationship between SMEs and insurance companies.

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1.947	2	.974	7.219	.001 ^a
Residual	21.986	163	.135		
Total	23.934	165			

a. Predictors: (Constant), Approached by Broker

The model, included being approached by broker. This factor had an effect on business-to-business relationship between SMEs and insurance companies, $F(2,163) = 7.23, p < .05$.

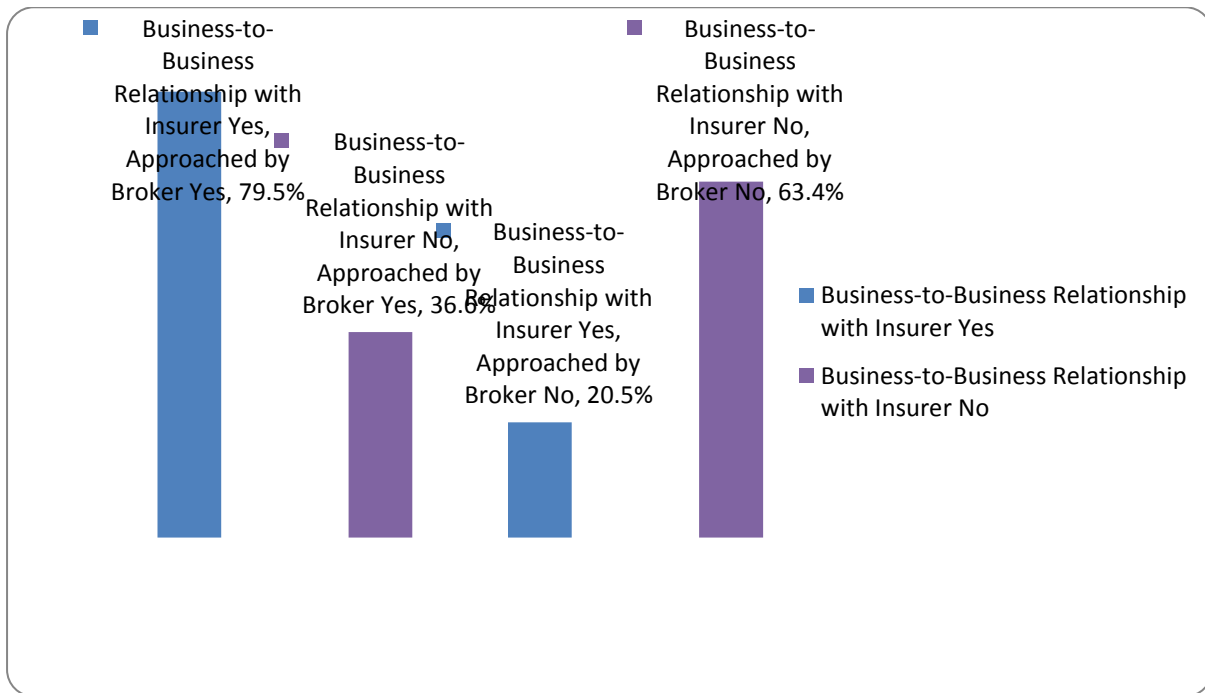
Coefficients^a

Model	Unstandardised Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.916	.122		7.508	.000
Approached by Broker	.243	.064	.286	3.794	.000

a. Dependent Variable: Business-to-Business Relationship with Insurer

It was further observed (refer to the table above) in the first model that being approached by an insurance broker is significant ($p = .000$) in predicting the business relationship between SMEs and insurance companies.

Fig 1 SMEs who have a business relationship with insurance companies and have been approached by an insurance broker.



The graph illustrates that 79.5% of the respondents who agreed to having been approached by an insurance broker also agreed to having a business relationship with an insurance company. The graph also illustrates that 63.4% who were not approached by an insurance broker did not have a relationship with an insurance company. The results illustrate that 36.6% of the SMEs who were approached by an insurance broker did not have a business relationship with an insurance company.

Hence, statistically we reject the alternative hypothesis and conclude that null hypothesis which states that:

*SMEs who have been approached by insurance broker have a business relationship with insurance companies is **accepted**.*

CONCLUSIONS

The research findings have established that there were many factors that influenced the existence of a business-to-business relationship between SMEs and insurance companies. The research has revealed that most of the SMEs had a relationship with an insurance company (78.1%). This business relationship was influenced by many factors. The responses showed that there was a relationship between the two constructs.

A deeper analysis on the responses revealed that being approached by an insurance broker has a positive correlation with the SME owner/manager having a business relationship with an insurance company. Out of the respondents who had been approached by an insurance broker, 79.5% of the SME owners/managers had a business relationship with an insurance company. The results helped the researcher to conclude that any form of interaction between SME owners/managers and insurance companies helps to facilitate a business relationship between the two constructs.

The training of SME owners/managers is crucial for the relationship building process between SMEs and insurance companies. This shows that SME owners/managers had not been offered any form of training or informative workshops by insurance companies. Although, more than half of them (66%) had been approached by an insurance broker.

Although SMEs in the Nelson Mandela Metropolitan Area have a business relationship with insurance companies they still do not have insurance. In all, there are factors that influenced the relationship between SMEs and insurance companies. SME owners/managers were aware of the importance of protecting their business from risks; yet, the cost and affordability of the insurance policy covers are hindering them from purchasing insurance policy covers.

RECOMMENDATIONS

The owners/managers of SMEs in the Nelson Mandela Metropolitan Area have a business relationship with insurance companies. However, the study has shown that there are many factors that influence the business relationship between SMEs and insurance companies. Insurance companies should increase their interaction with SMEs. They need to hold frequent workshops for SMEs where they can get a chance to inform them of their various product offering. Insurance companies can hold research programmes twice a year, where they can be able to find out what sort of insurance cover they need to offer SMEs and at the costs that they can afford.

One of the major factors that influenced the relationship building process between SMEs and insurance companies is the reliability of the insurer (96%). Insurance companies can use workshops, road shows and they can hold summits where they can invite SMEs. This will give them a chance to interact with their clients and create a platform where they can provide information concerning their premiums and pay outs when a claim has been made.

Insurance companies need to build a relationship with SMEs and trust should be the foundation. They need to train their staff on how to deal with SME owners/managers, their

products and payment plans as well as claims. This is all part of the relationship building process.

The study revealed that 72.1% of the SME owners/managers want to be trained about insurance. Insurance companies can therefore, hold frequent workshops and training sessions with SME owners/managers so that they can have an understanding of the type of insurance policy covers that their businesses need , the premiums and how insurance claims can work for them. Based on the number of SME owners/managers who have been trained, insurance companies are not holding needs analysis with their client (SMEs). It is required under the FAIS Act of 2002 that they hold educational workshops, to enable them to get the needs of their clients and offer them products that suit their financial bracket. This is in breach of the requirements stipulated by this Act. The government needs to ensure that insurance companies follow the law and if they fail to meet the requirements stiffer penalties need to be introduced. In other words, the government should amend the Act and introduce stiffer penalties to those who default.

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**TIME VARYING INTERNATIONAL STOCK MARKET CO-MOVEMENT:
CONSIDERATIONS FOR SOUTH AFRICAN INVESTORS**

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ABSTRACT

The recent global financial crisis once again emphasized the importance of understanding the nature and degree of co movement between stock markets of different countries and how it impacts on global diversification possibilities. This study investigates diversification possibilities from the perspective of South African investors. We calculate correlations between the JSE and major developed and emerging stock markets over a period of 16 years and sub periods accounting for specific events. Our results show that correlations between returns on the JSE and all the developed and emerging market stock markets in our sample have increased since 1994. This is not surprising given our isolation and subsequent re-introduction into global financial markets. Except for the recent global financial crisis correlations are not high and suggest that South African investors can benefit from diversification and investments in these markets. Differences in standard deviations of returns further enhance the opportunity for portfolio diversification.

1. INTRODUCTION

International diversification of portfolios and global integration of stock markets have always been areas of great concern for international fund managers and researchers. The recent global financial crisis have once again emphasized the importance of understanding the nature and degree of co movement between stock markets of different countries and how this phenomenon impact on global diversification possibilities.

The Johannesburg Securities Exchange (JSE) forms a small part of the world stock markets and international portfolio diversification is an important consideration for South African investors. On 1 July 1997 when a foreign investment allowance for South African taxpayers were announced, the benefits of diversifying internationally was a foregone conclusion - amidst a weak currency (for example, a dramatic depreciation in the value of the rand during 1996) and marked underperformance of the JSE when compared with global markets during the 1990's⁴. This was reinforced by the East Asian and Russian crises in 1997 and 1998, as well as a further depreciation of the Rand in 1998. However, the resources boom and the rise of emerging stock markets in the last decade significantly changed relative returns between emerging and developed stock markets. After a ten year period of marked over

⁴ For example, promotion material for offshore investments at the time mentioned that offshore investments for the five years ended December 1997 have outperformed local equity investments by as much as 42%. The same material also shows how certain overseas sectors have outperformed the JSE all share index by 90% in US\$ terms over the same five year period.

performance of JSE relative to developed equity markets, there is anecdotal evidence that SA investors do not appreciate the value of international diversification anymore.⁵

There is considerable academic research that documents the benefits of international diversification. This includes studies based on the mean-variance optimization framework of Harry Markowitz, showing that combining less than perfectly correlated assets in a portfolio can reduce portfolio risk. Thus, correlation coefficients play a central role in empirical studies on the benefits of international diversification. This includes the time varying nature of correlation coefficients - the underlying correlations between assets returns change over time and in particular circumstances - a phenomenon recorded in several empirical studies.

Increasing correlations during financial crises has led to the acquisition that “diversification is dead when you need it most”. This is an acquisition that was often heard in the aftermath of the 2008 global financial crisis. Occasional booms and asset price bubbles can also lead to an increase in correlations. The rise in the share prices of resource based stock indices in 2003 to mid 2008 is a potential example thereof. Globalization and increased stock market integration lead to an increase in stock market correlations and presumably diminishes the benefits of international diversification. While most investors have long-term investment goals, they are particularly averse to large losses, even over the short term. As a result, our paper include an analysis of correlations and the potential impact of diversification during periods of severe market stress. The relatively short time period covered in this study include two major crises period- the East Asian and Russian crises of 1997/98 and the recent global financial crisis, originating from the sub-prime crisis in the USA.

2. RESEARCH OBJECTIVES

Most studies on the benefits of international diversification have been done from the perspective of United States investors. However, all of these issues raised in these studies are also relevant for South African investors. The aim of our study is twofold: First, to empirically investigate the correlation between the JSE and major developed and emerging stock markets over a period of 16 years and to assess the impact of specific events on these correlations. In the process it will be established whether the trends identified in the literature are also observed for the JSE. This study makes an important contribution by extending the existing empirical literature to emerging stock market co-movement with major developed and emerging markets. The second major aim of this paper is to place these empirical findings into context and translate it into practical recommendations for South

⁵ See for example, ASISA quarterly commentary on unit trust flows and several investment commentaries, including Alphen angle www.alphenam.co.za

African investors. In this regard, we explain what investors can do with the empirical results presented in this paper. It includes a discussion of what correlation does and does not mean for diversification and the implications of dynamic correlations. Most notably, we show how correlations can deviate from the long term average given specific circumstances, namely during financial crises, the impact of occasional stock market booms and the impact of stock market integration.

3. LITERATURE REVIEW

This paper builds on an extensive literature that can roughly be grouped into two categories: first, the role of correlation coefficients in demonstrating the benefits of international diversification. Second, how correlation coefficients change over time and during different circumstances and how this impact on the benefits of international diversification. The latter includes literature on asset market co-movement and financial integration, the international transmission of crises and the impact of occasional booms and bubbles on correlation coefficients.

Initial research on international diversification focused on diversification between developed stock markets while later research outlined the increase in correlation coefficients and presumably a decreasing potential of international diversification. Studies that focus on the diversification benefits of emerging markets are clustered around the late 1990s. These studies also report initial diversification benefits, while later studies focus on the impact of emerging stock market integration on diversification benefits. The main hypothesis tested is whether or to what extent increased integration diminish diversification benefits, as one would expect on a priori grounds. The following section provides an overview of studies in this regard.

3.1 Correlation coefficients and the benefits of international diversification: Theory

Benefits from international diversification are well documented; low correlations between domestic and foreign securities allow for the construction of portfolios with improved return and risk characteristics (Solnik 1995). The theoretical framework in this regard mainly builds on the pioneering work of Harry Markowitz (1952) that showed the importance of covariance of returns in the mean variance portfolio optimization framework. By combining uncorrelated assets, the movements of one asset can be expected to at least partially mitigate the movements of the second asset, reducing the average volatility of a portfolio. The lower the covariance between securities, the smaller the variance of a diversified portfolio becomes, relative to the variance of the securities making up the portfolio. Thus, the primary motive for

international diversification is to take advantage of the low correlation between stocks in different national markets.

3.2 Correlations coefficients and the benefits of international diversification: empirical evidence

Grubel (1968) and Levy and Sarnat (1970) were among the first to show that combining foreign stocks with domestic stocks improved portfolio diversification and Bergstrom (1975) presented evidence that international portfolio diversification could reduce portfolio variability by up to 40% without curtailing returns. In his well cited article on international diversification Solnik (1995) graphically illustrates the lower levels of portfolio risk achieved within internationally diversified portfolios. Solnik's contribution and the accumulating evidence in the literature on international diversification prompted the inclusion of the topic in investments textbooks.

A large body of empirical research suggests that the underlying correlations between asset returns change over time and in particular circumstances and have important relationships to events such as volatility shocks. For example, there is a well-documented pattern that short run correlations among international equity markets tend to be asymmetric: correlations across national stock markets are higher when the United States (US) stock market declines significantly, and when the US economy is in recession. Tokat (2006) shows that since the early 1970s more than 70% of developed countries have experienced bear markets in stocks simultaneously with a U.S. bear market. The high international stock market correlations during U.S. bear markets help to explain why global contractions tend to be more highly synchronized across countries than global expansions.

Longin and Solnik (2001) find that correlation is not related to market volatility per se, but to the market trend, with correlation increasing during bear markets but not in bull markets. Ang and Bekaert (2002) show that, despite the risk of time varying correlations, under most circumstances, the benefits of international diversification are still significant. Solnik, Boucelle, and Le Fur (1996), examined correlation and volatility of securities markets of the major industrialized countries. They found that correlations among these markets fluctuate widely and tend to increase over time; volatility is contagious across national borders and intermarket correlations generally increase during periods of high volatility. Global investors thus face increased correlations at the exact same time when effective diversification is needed due to increased volatility. Erb, Harvey, and Viskanta (1994) in an earlier paper also found that international correlations are higher during periods of higher volatility.

More recently, research by US analysts highlighted a rise in correlation coefficients between the US stock market and other developed stock markets. For example, Bernstein and Pinkernell [2007] wrote that their “analysis continues to show that 2000’s non-correlated asset classes are now often highly correlated to the S&P 500, and their diversification benefits seem to be greatly reduced, if not completely eliminated.” The worldwide decline in stock prices on February 27, 2007, prompted the Economist [2007] to assert that “diversification did not bring the benefits that investors might have expected.”

Asness, Krail and Liew (2004) showed that international stocks do a poor job of reducing risk only when an investor focuses on short holding periods. Over the longer term, the inclusion of international stocks lead to more efficient portfolios. This study use a relatively long time period of more than 50 years (1950-2004). This is in contrast to the majority of studies that use a time period of around 20 years. Another study that use a long time period (more than 100 years) is that of Statman and Scheid (2004). They observe that a chronological review of the literature on the benefits of international equity diversification demonstrates the varying impact of international equities on U.S. portfolios over time. When foreign stock markets were outperforming the U.S. stock market in the 1950–1980 era, studies demonstrated the risk reduction and higher returns from international diversification. Studies that rely on mid-1980s to 1997 stock market returns show little benefit from international diversification. They attribute the reduced interest in global diversification among US investors in the 1990s and early 2000s to poor performing international stocks.

3.3 Early empirical evidence documenting the benefits of emerging stock markets in an internationally diversified portfolio

Emerging stock markets represent a small, but dynamic, set of investment opportunities. The risks of investing in emerging markets are typically as dramatic as these markets’ potentially high rewards. For instance, Tokat and Wicas (2004) note that annual gains or losses of more than 80% are not unusual. Emerging markets are currently being perceived as comparatively low risk, high return investment destinations. Practitioners in the financial industry emphasize their somewhat better fiscal and monetary disciplines than their larger developed siblings. Growth prospects for emerging markets are perceived to be significantly better, among other things, due to more favourable demographics. In this regard, Claessens and Kose (2008) note that the year 2007 will probably be remembered as a landmark year for emerging markets. As a group, these economies accounted for more than two-thirds of global growth in 2007, and, for the first time in modern history, China, the leading emerging economy, contributed more to global growth than the US. The volume of net private financial flows to these countries also reached record-high levels.

Academics and practitioners largely ignored Errunza's work on emerging markets (1977) and interest in emerging market investments rose in the early 1990s. It was assumed that they would then serve neatly as a hedge in a global portfolio. During the early 1990s Harvey (1995) attributed the attractiveness of emerging markets to their low correlations with developed markets. Earlier research in this regard confirms the conclusion that the inclusion of emerging markets into a diversified portfolio increases the efficient set of assets for investment (De Santis (1994), Divecha et al., (1992); De Santis, (1993)). Although emerging market equity returns are highly volatile, they are relatively less correlated with equity returns in the developed world, making it possible to construct low risk portfolios.

Fernandes (2003) used mean variance spanning tests and showed that emerging markets provide little value added to a diversified portfolio of developed markets equities. He concluded that superior returns could be realized by investors who specialize investment in some markets, rather than investing in all emerging markets.

3.4 The impact of integration on the diversification benefits of emerging markets

As early as 1995, Harvey showed that emerging market correlations with developed markets were changing through time, as they became more integrated into the global financial system. In principle, liberalizations tend to increase correlations and hence reduce diversification benefits. A large body of research has therefore attempted to identify how the integration of previously segmented markets has changed patterns of cross-country equity correlations. This includes the argument by Solnik (2002) that increasing correlations are a natural progression as markets mature, develop, and become more integrated. Bekaert and Harvey (1995, 2000) provide direct evidence that market integration and financial liberalization change the co-movement of emerging markets stock returns with global markets. The implication is that evolution from a segmented to an integrated market fundamentally changes the co-movement with other markets as well.

Results from several studies have shown that changes in correlations do not invalidate the case for international investing, for at least two reasons. First, in most of these studies average correlations obscure important differences. This emphasizes the importance of specific country case studies like this one. Secondly, differences in industrial structures may cause correlations not to increase despite closer integrated markets. Roll (1992) also highlighted the importance of industry structure and concentration in determining stock market behavior. Therefore he expected countries with similar industrial compositions to have more highly correlated stock market returns. Bekaert and Harvey (1995: 436) pointed out that a country may be perfectly integrated with the world market but may nonetheless

generate a “low or negative correlation [with the world market] because its industry mix is much different from the average world mix”.

Lastly, Goetzmann, Li and Rouwenhorst (2007) stressed that varying correlations in equity markets through time only partly contributes to international diversification, while the variation in the investment opportunity set also contributes to diversification. For example, in the last two decades, the opportunity set expanded dramatically at the same time correlations of the major markets has increased. As a result, the benefits to international diversification have recently been driven by the existence of emerging capital markets. Globalisation expand the opportunity set, but the diversification benefits of cross-border investing during these periods relies increasingly on investment in emerging markets.

3.5 Crises

Another related literature has focused on the co-movement of asset markets during financial crises. Since financial crises impact on returns, volatilities and correlations among the various investment alternatives such periods can severely impact on the benefits of international diversification.

Initially, papers attempted to simply document whether a crisis generated a significant increase in cross-market correlations between the crisis country and other countries - with a significant increase interpreted as evidence of contagion. Forbes and Rigobon (2002) showed that during the 1997 Asian crisis, no emerging market suffered contagion, including South Africa. The results of Collins and Biepkie (2003) contradict the Forbes and Rigobon results for South Africa. They found that, along with Egypt, South Africa is one of the most integrated countries in Africa with regard to its financial markets. Based on their degree of integration, Egypt and South Africa were the most affected by contagion during the Asian crisis. These results are not entirely unexpected, given that these two are the largest and most traded markets in Africa, and therefore are likely to be the most integrated with global capital flows.

More recent work has attempted to measure the different channels by which a shock to one country spreads to other countries and also why all episodes of financial volatility does not impact equally on all countries. For example, Forbes and Chinn (2003) note that episodes of financial volatility do not impact equally on all countries. In this regard they quote the first half of 2002, when the US stock market fell by about 17 percent and many other markets declined in harmony. Over the same 6- month period, Finland's stock market fell by 30 percent, Ireland's by 14 percent, Mexico's by 11 percent, and Hong Kong's by 6 percent.

Other stock markets, including the JSE (with returns of 21%) appeared to be isolated from the series of negative news in the US.

However, it cannot be argued that the short term impact of the crisis on emerging market returns, volatility and co-movement was devastating. Tokat and Wicas (2004) note that more than 90% of emerging markets experienced bear markets during the Latin American crisis of 1994–1995 and the Asian crisis of 1996–1998. Emerging market volatility increased significantly during these crisis periods and average returns were negative – in contrast to their overall high and positive return rates.

In terms of the JSE, the majority of literature focuses either on the initial liberalization process or integration with regional markets. Chinzara and Aziakpono (2009) analysed returns and volatility linkages between South Africa and Australia, China, German, Japan, the UK and the US for the period 1995 to 2007 using VAR and univariate GARCH models. Their results confirm the existence of both returns and volatility linkages between South African and some of the markets studied. By its unique empirical focus on correlation coefficients between JSE returns and those of major emerging and developed markets, as well as the time varying nature of these correlations, this paper partly fills a gap in the empirical research done on the JSE.

4. RESEARCH METHODOLOGY

In order to address the research aims of the paper, statistical analysis of various developed and emerging stock market indices is conducted. Returns of the indices are calculated, together with their means and standard deviations. Correlation coefficients as well as coefficients of variation are also calculated and compared over different sample periods. The 16 year sample period since South Africa's reintroduction to international markets is relative short if compared to similar international studies. It is, however, the longest time period available for the comparative data.

5. EMPIRICAL ANALYSIS

5.1 Data

The South African stock prices are represented by the JSE All Share index (JSEALSH). The rest of the sample includes stock market indices of the developed markets of the USA (the SandP500), UK (FT100), Germany (DAX) and Australia (AUS) as well as some emerging market countries. South Africa is currently classified as an “advanced emerging stock market” by FTSE – together with Brazil, Hungary, Mexico and Taiwan. Two further groupings

of emerging markets are also included; the so-called “BRIC” countries and “BASIC” countries.

The BRIC acronym refers to Brazil, Russia, India and China. These four fast-growing countries cover more than 25% of the land area of the world and host almost half of the world’s population. An almost similar grouping, called the “BASIC” countries was officially formed at the end of November 2009. The BASIC group, including South Africa and excluding Russia, joined forces during the Copenhagen climate summit as a combined front of large developing countries.

In order to address the empirical problem of non-synchronous trading we employ weekly data in our analysis. The raw data, index values in local currencies, were obtained from FTSE in daily frequency. The weekly values thus comprise the average of the five relevant daily closing index values of the particular week. The use of index values expressed in local currencies should prevent currency movements from influencing the estimated relationships between markets.

Our sample spans from January 1994 to November 2009; with the Brazilian index values only available from November 1994 and the Russian values from July 1997. This sample includes two major crisis periods for South Africa. The first is the mainly emerging markets crisis of East Asia starting in June 1997 followed by the Russian crisis in August 1998 (Vorontkova 2004). The second crisis is the recent global financial crisis, which started with the sub prime crisis of July 2007 and intensified with the September 2008 Lehman Brothers collapse (Nowak, Andritzky, Jobst and Tamirisa 2009). In order to capture the impact of these crises on the relationship between the JSE and other indices, the statistical analysis will be conducted over appropriate subperiods.

Figure 1: Historical movement of the JSE and global markets

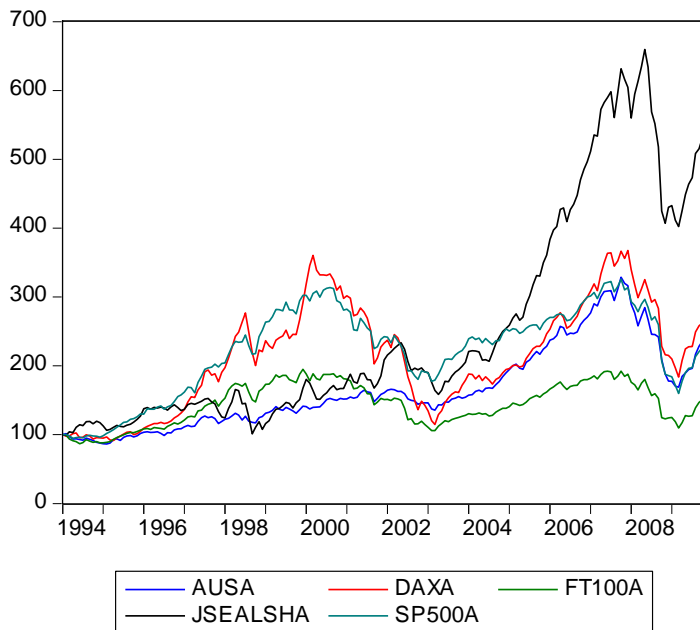


Figure 1 compares the historical path of the JSE with those of the main global markets. All the indices were standardised to start at a value of 100 in the beginning of 1994. Generally, the global markets grew until 2000, then contracted until 2003 and grew again until the 2007/8 down turn.

Figure 2: Historical movement of the JSE and emerging markets

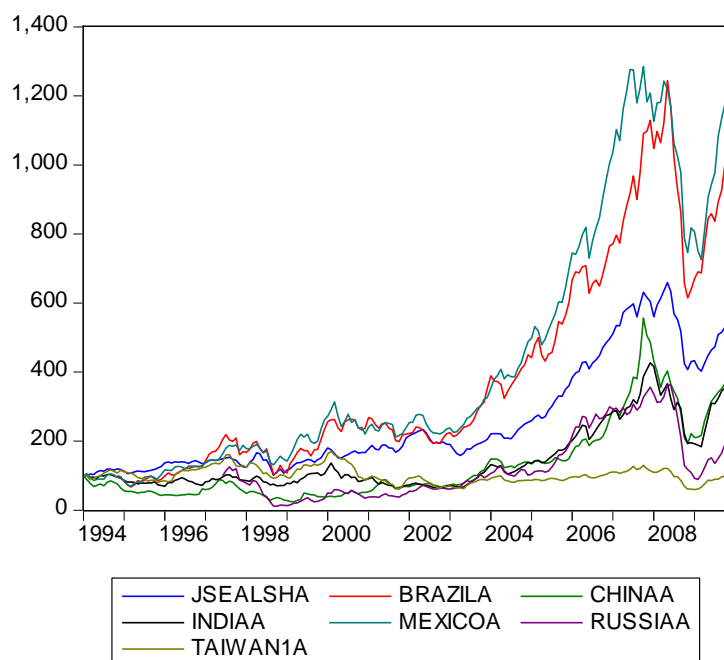


Figure 2 indicates how the emerging markets, with the exception of Taiwan, follows the same general trend over the 16 years. It further illustrates the high growth and subsequent returns realized compared to the developed markets in Figure 1.

5.2 The whole period: 1994-2009

Rates of return for all the indices were calculated as a percentage log difference and reported in table 1, together with the respective minima, maxima, standard deviations and coefficients of variation. The last column of table 1 also reports on the correlation between weekly returns on the JSE and the other indices.

Table 1: Rate of return of stock market indices: 1994 - 2009

	Mean	Maximum	Minimum	Standard deviation	Coefficient of Variation	Correlation
JSEALSH	0.202	10.255	-12.724	2.435	12.076	1
AUS	0.103	7.292	-11.004	1.746	16.891	0.594
DAX	0.111	12.331	-13.905	2.728	24.559	0.599
FT100	0.051	8.239	-11.644	1.995	39.434	0.589
SP500	0.102	8.511	-13.232	1.987	19.504	0.593
BRAZIL	0.300	21.174	-24.974	3.888	12.962	0.539
CHINA	0.150	19.572	-20.423	4.253	28.361	0.354

INDIA	0.162	16.053	-14.534	3.355	20.692	0.417
MEXICO	0.302	11.500	-15.506	3.190	10.580	0.531
RUSSIA	0.083	41.871	-33.487	6.531	78.764	0.535
TAIWAN1	- 0.006	13.402	-11.473	3.273	-562.648	0.455

According to table 1 South Africa had the third highest rate of return after Mexico and Brazil. Interestingly the standard deviations indicate that the JSE is positioned right in between the developed and emerging markets. The maximum and minimum values also indicate that the JSE market is less volatile than the other emerging markets. As the sample period includes the Russian crisis, it is not surprising that the Russian markets (with the highest standard deviation, the highest maximum and the lowest minimum) was the most volatile during this period.

The higher standard deviations of emerging markets compared to the JSE indicate diversification potential for South African investors in those markets. All of the estimated correlations of the JSE returns with fellow emerging markets are lower than the correlations with the developed markets. There seems to be substantial opportunities for South African investors to diversify through investments in emerging market stock markets. Although correlations with the developed markets were higher, all of them were below 0.6 indicating that diversification benefits also existed for South African investors investing in developed stock markets.

The calculated coefficient of variation gives an indication of the volatility per unit of return. The stock markets of Mexico, Brazil and South Africa had the lowest volatility per unit of return and investing in them thus posed a lower risk than some of the developed markets – mainly because of the low rates of return of some developed markets.

5.3 The period 1994 – June 1997

Table 2: Rate of return of stock market indices: 1994 – June 1997

	Mean	Maximum	Minimum	Standard deviation	Coefficient of Variation	Correlation
JSEALSH	0.211	4.232	-4.912	1.557	7.386	1
AUS	0.145	4.156	-3.765	1.431	9.853	0.306
DAX	0.299	3.967	-4.297	1.674	5.593	0.262
FT100	0.181	3.442	-3.110	1.323	7.315	0.276

SP500	0.355	4.431	-4.212	1.282	3.613	0.265
BRAZIL	0.583	11.472	-18.110	3.830	6.569	0.189
CHINA	- 0.163	15.431	-20.423	4.055	-24.926	0.105
INDIA	0.066	12.984	-6.793	3.116	46.928	0.048
MEXICO	0.303	11.500	-9.532	3.355	11.061	0.129
RUSSIA	NA	NA	NA	NA	NA	NA
TAIWAN1	0.205	13.402	-7.538	2.832	13.797	0.184

Between 1994 and mid 1997 the correlations are quite low. Theoretically this should indicate vast potential for investment diversification. However, this is the period just after democratization in South Africa and re-emerging after years of isolation South Africa still had significant capital controls in place and investing offshore it was not such a viable option.

5.4 The period July 1997 – December 1998

Table 3: Rate of return of stock market indices: July 1997 – December 1998

	Mean	Maximum	Minimum	Standard deviation	Coefficient of Variation	Correlation
JSEALSH	- 0.403	6.194	-12.724	3.672	-9.116	1
AUS	- 0.003	4.390	-7.720	1.990	-664.746	0.551
DAX	0.336	7.399	-8.646	3.292	9.783	0.597
FT100	0.283	5.909	-5.463	2.344	8.280	0.582
SP500	0.416	5.812	-8.625	2.080	5.003	0.580
BRAZIL	- 0.935	15.642	-24.976	6.460	-6.911	0.611
CHINA	- 1.300	14.512	-15.186	5.408	-4.161	0.247
INDIA	- 0.445	5.458	-6.729	2.940	-6.600	0.321
MEXICO	- 0.176	9.720	-11.786	4.055	-23.090	0.630
RUSSIA	- 2.667	41.871	-28.610	11.574	-4.340	0.533

TAIWAN1	- 0.596	8.806	-7.179	3.271	-5.484	0.452
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The next period, July 1997 until the end of 1998, includes the East Asian crisis as well as the Russian crisis. The average returns of all the emerging markets, as well as the Australian stock market, were negative. As is expected during crisis periods, the correlations increased; although not only did the links with the emerging markets strengthen, but also with some of the developed markets. Apart from the emerging markets crises, this period also includes South Africa's re-introduction into the global markets.

5.5 The period 1999 – June 2007

Table 4: Rate of return of stock market indices: 1999 – June 2007

	Mean	Maximum	Minimum	Standard deviation	Coefficient of Variation	Correlation
JSEALSH	0.375	6.451	-8.590	2.154	5.737	1
AUS	0.197	5.318	-6.602	1.271	6.454	0.610
DAX	0.102	12.331	-11.783	2.761	26.895	0.580
FT100	0.024	8.239	-8.581	1.837	77.097	0.541
SP500	0.045	8.053	-8.777	1.838	41.149	0.561
BRAZIL	0.485	21.174	-15.126	3.149	6.482	0.438
CHINA	0.564	19.572	-13.491	3.617	6.415	0.271
INDIA	0.321	10.563	-12.131	3.087	9.615	0.443
MEXICO	0.477	10.653	-8.319	2.805	5.873	0.516
RUSSIA	0.691	20.573	-17.340	4.858	7.029	0.411
TAIWAN1	0.059	10.940	-11.473	3.331	56.727	0.427

This period is a relatively tranquil period in the international capital markets. Furthermore, this period includes the resources tocks booms and the rise of emerging stock markets, especially the so-called BRIC countries. This is evident from the information in table 4 -the developed markets realised quite low returns during this period and were outperformed by all the emerging markets except for Taiwan. Figure 1 confirms these calculations. Almost all of the developed markets ended the period on the same level as where it started – with a period of contraction in between. On the contrary, the emerging stock markets showed healthy growth. The significantly lower coefficients of variation echo the lower risk and higher returns of the emerging markets (with the exception of Taiwan) compared to the developed markets. Except for Australia and India, the JSE's correlations generally decreased during

this period. The Chinese stock market, still with several investment barriers, remained relatively uncorrelated with the JSE.

5.6 The period July 2007 – November 2009

Table 5: Rate of return of stock market indices: July 2007 – November 2009

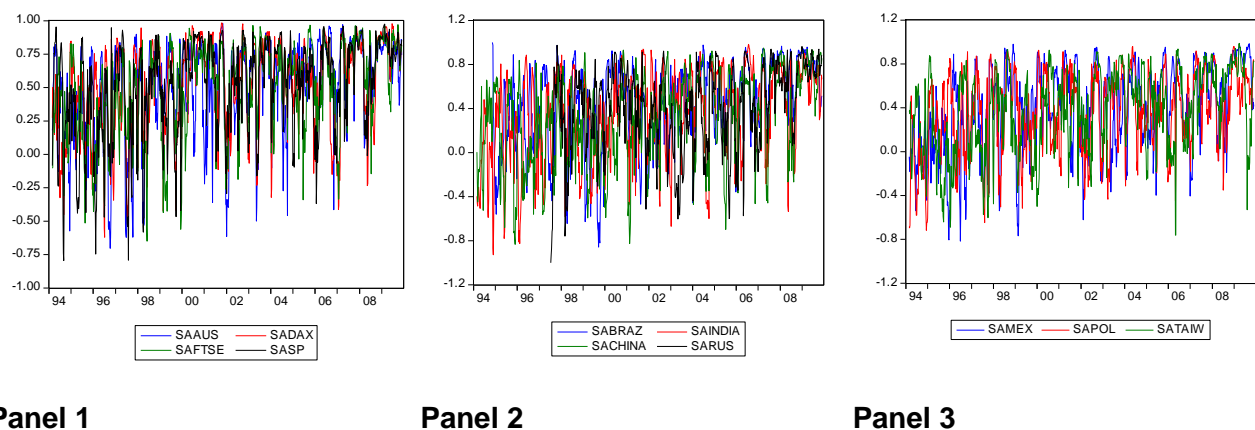
	Mean	Maximum	Minimum	Standard deviation	Coefficient of Variation	Correlation
JSEALSH	-0.047	10.255	-9.161	3.257	-69.774	1
AUS	0.217	7.292	-11.004	2.980	-13.682	0.735
DAX	-0.268	6.010	-13.905	3.371	-12.592	0.788
FT100	-0.186	7.586	-11.644	2.889	-15.561	0.795
SP500	-0.254	8.511	-13.232	2.973	-11.709	0.795
BRAZIL	0.101	10.072	-18.631	4.094	40.630	0.832
CHINA	0.044	13.271	-14.267	5.436	122.344	0.678
INDIA	0.118	16.053	-14.534	4.590	38.821	0.619
MEXICO	-0.022	8.982	-15.506	3.578	-164.24	0.782
RUSSIA	-0.350	20.229	-33.487	6.945	-19.849	0.739
TAIWAN1	-0.171	12.182	-9.553	3.632	-21.279	0.702

The last of the sub periods includes the recent global financial crisis. According to the average weekly returns for the crisis period the stock markets of Russia, Germany and the US were worst hit. Despite the turmoil on the developed markets Australia, Brazil, India and China managed to achieve positive growth rates on average. As was expected the JSE has been more correlated with all of the market indices during this crisis, a period that is widely recognized as a truly global crisis in the popular and academic literature.

5.7 Short term deviations detected through rolling correlations

In order to investigate short term fluctuations in correlations between the stock market returns we calculated eight week rolling correlations between the JSE and each of the other indices. Table 6 contains a graphical representation of these correlations. Panel 1 portrays the developed market correlations with the DAX, FTSE, S&P500 and the Australian stock market. The short term correlations are increasing over time and the volatility is decreasing – an indication of increased integration. Panel 2 includes the rolling correlations with the BRICs countries. The same trend is visible as observed in panel 1, correlations are lower and still more volatile. Panel 3 includes Mexico, Poland and Taiwan – the other advanced emerging countries. Out of all three groupings the gains from diversification is the highest here. The correlations are lower and more volatile than in the other two groups in panel 1 and 2.

Table 6: Rolling correlations



Appendix 1 graphically illustrates rolling correlations for two-year periods. The magnitude of the short term deviations in the calculated correlations becomes evident from these graphs. Lower correlations were reported during: mid 1997, early 1998, end 1999, beginning 2002 and middle 2008. Increased correlations were observed during: beginning 2004, mid 2006 and mid 2007, end 2007, end 2008 and the whole of 2009. These results are in line with the well documented trend that correlations between stock market returns are lower in tranquil times and tend to increase during times of market stress. However, this observation does not invalidate the long term case for international diversification. For example, the diversification possibilities within the emerging markets group is found in the relative low rolling correlations between the JSE and the stock markets of Brazil, China, Taiwan and India towards the end of 2009. As the financial crisis subsides, the heterogeneous economic

structures and responses to the crisis became evident from these correlations. Of further significance is the decrease in the correlation with Taiwan, illustrating that international investors do differentiate between different emerging market countries.

6. CONCLUSIONS

Correlations between returns on the JSE and all the developed and emerging market stock markets included in the study have increased since 1994. This is not surprising given our isolation and subsequent re-introduction into global financial markets. However, except for the recent global financial crisis these correlations are not high in absolute terms and suggest that South African investors can benefit from diversification and investments in these markets. Apart from the less than perfect correlations, differences in standard deviations of returns on different markets further enhance the opportunity for portfolio diversification.

Surprisingly, returns on the JSE are more correlated with developed markets than with fellow emerging markets – rendering even more options for diversification within emerging markets as a group. This is a clear indication that investors do regard these countries as separate entities and those country specific factors are taken into account when they make investment choices.

Short run correlations often differ substantially from the long term average, a fact that has been documented in various empirical studies, with data from different markets and for different time periods. Our analysis shows that this is also the case for returns on the JSE. International financial crises and occasional booms and bubbles are some of the occurrences that contribute to this phenomenon. The accusation that diversification disappears when you need it most is thus deemed not to be true for South African investors. Although the conclusions are based on a relatively short estimation period, the conclusion that international diversification can benefit investors remain intact.

7. MANAGERIAL IMPLICATIONS/ RECOMMENDATIONS FOR INVESTORS

As long as there is less than perfect correlation, international markets are not moving in lockstep with each other, allocating some assets to international investments should reduce the volatility of a portfolio. International differences in economic cycles, fiscal and monetary policies, currencies, and sector weightings suggest that international correlations should be less than perfect.

Correlations among the JSE and emerging markets and developed markets have risen, in part due to transitory factors and in part due to secular trends of financial integration. An examination of the short term performance may help investors to resist the strong temptation to believe that the stock market's behavior in any one period invalidates the long-term case for international investing. In the short run, return and volatility differentials between markets may dominate the benefits of international investing. Correlation - the cornerstone of the long-term case for international investing - plays a minor role.

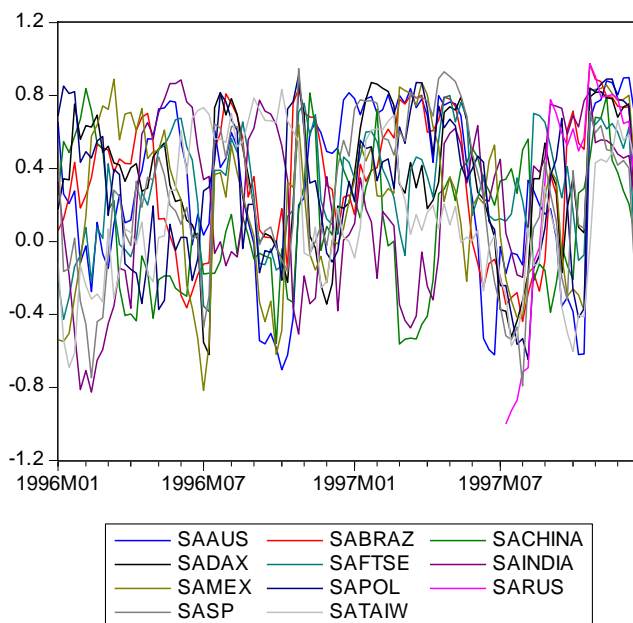
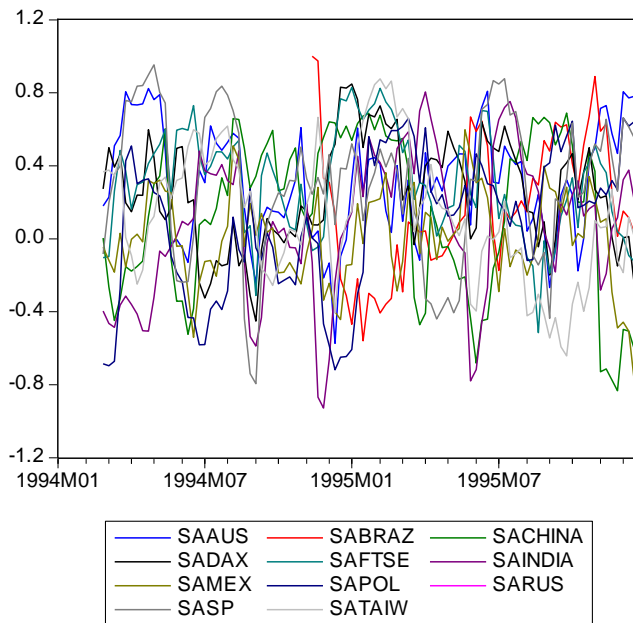
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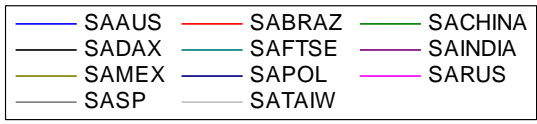
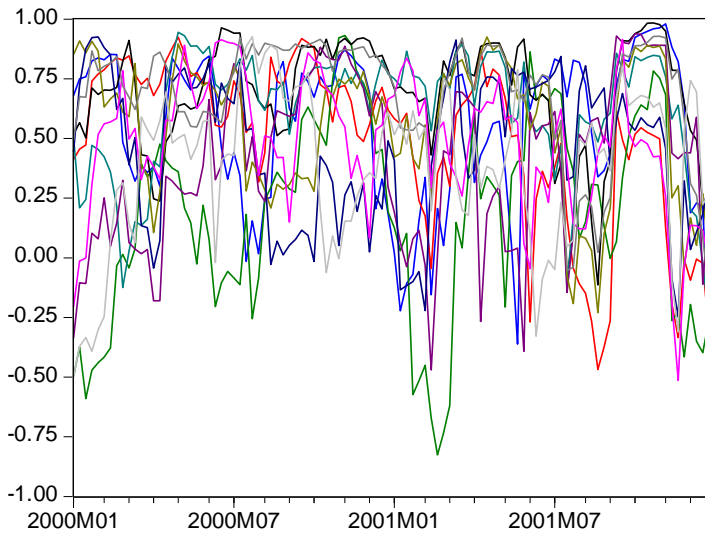
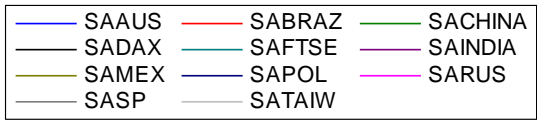
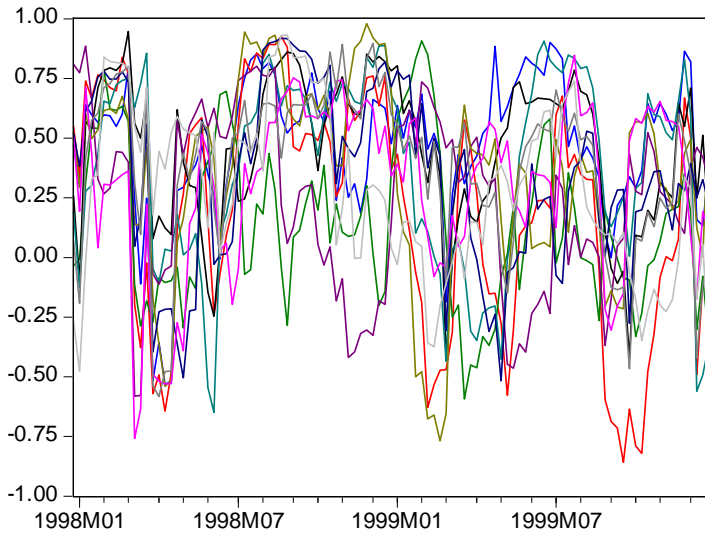
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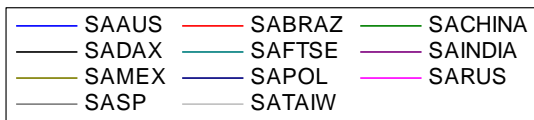
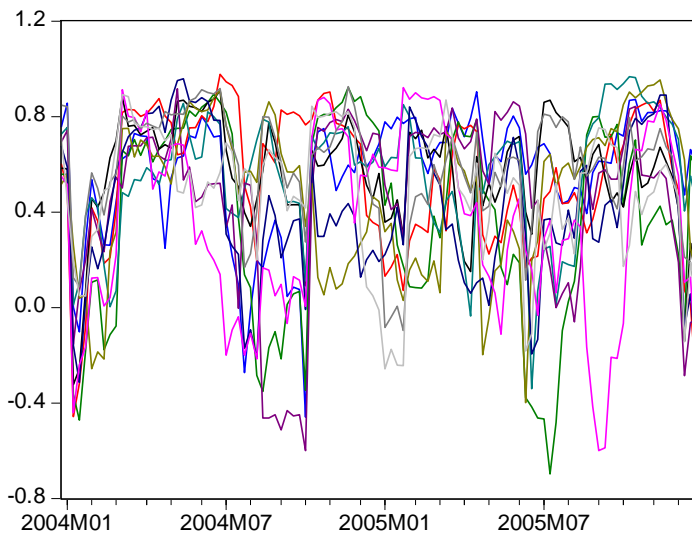
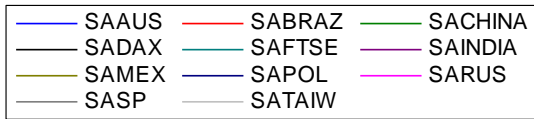
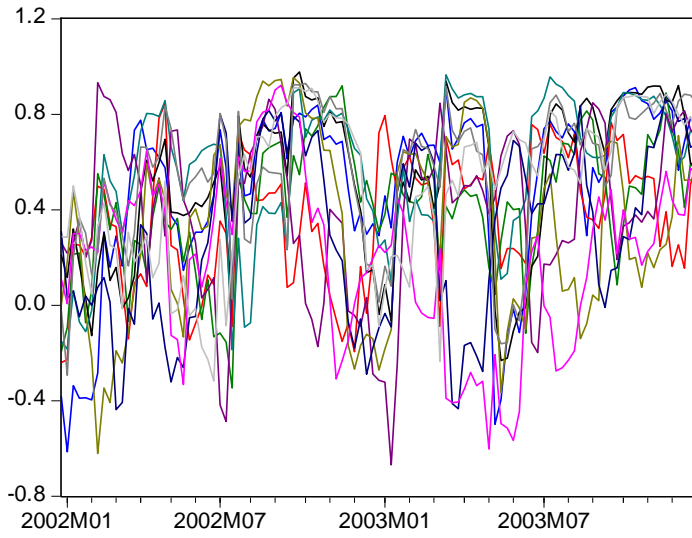
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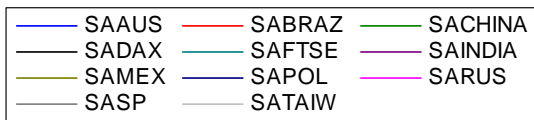
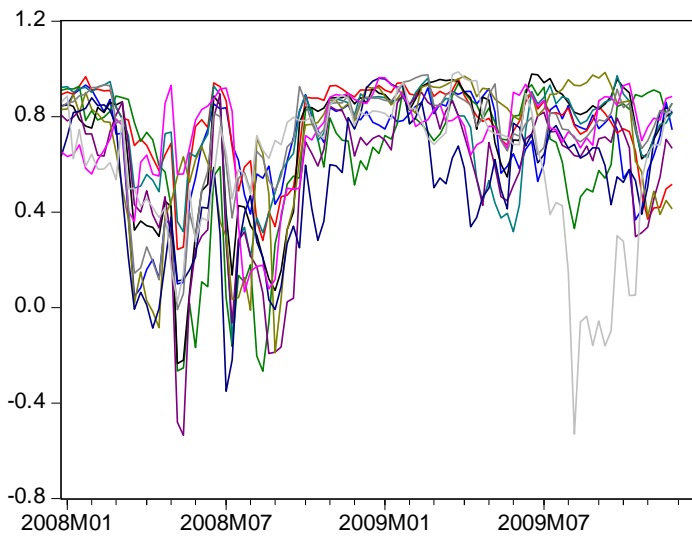
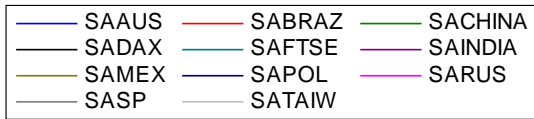
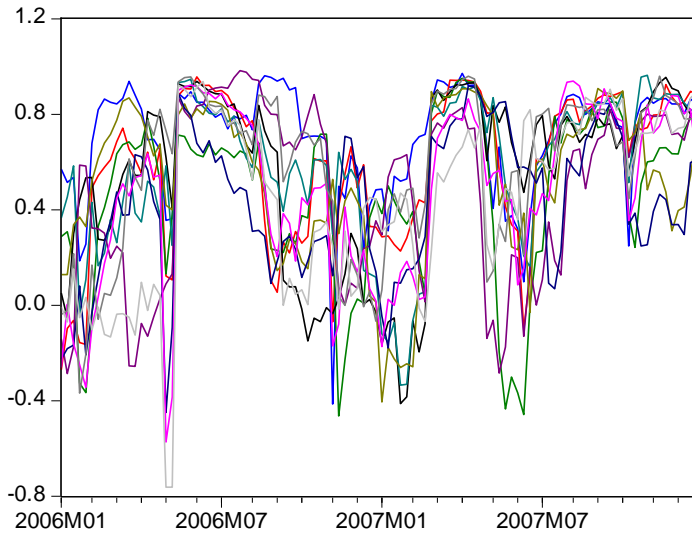
APPENDIX A: Rolling correlations

The following figures indicate 8-week rolling correlations, over a two year period, between returns on the JSE and stock markets of: Australia (SAAUS), Brazil (SABRAZ), China (SACHINA), Germany (SADAX), the UK (SAFTSE), India (SAINDIA), Mexico (SAMEX), Poland (SAPOL), Russia (SARUS), the US (SASP) and Taiwan (SATAIW)









**DETERMINING THE UNDERLYING FACTORS PASSENGERS CONSIDER WHEN
SELECTING A SOUTH AFRICAN DOMESTIC PASSENGER AIRLINE: AN
EXPLORATORY STUDY**

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ABSTRACT

As customers are exposed to more choices, they become increasingly demanding in terms of their expectations of service delivery. By identifying customer expectations, businesses can deliver quality services that could lead to greater levels of customer satisfaction, increased loyalty and ultimately retention. South African domestic passenger airlines must identify and deliver on customer expectations in an attempt to retain customers as the industry is marked by fierce competition. The purpose of the study is to determine the factors passengers consider important when selecting a South African domestic passenger airline. Data was collected from 324 passengers at OR Tambo International Airport. Four factors were identified, namely service offered by airline employees, departing and arriving on time and feeling safe when flying; on-line services offered by domestic airlines; check-in related services as well as convenient flight schedules provided by domestic airlines; and comfortable post check-in as well as supplementary services offered by the airline.

INTRODUCTION

It is important for businesses to identify and focus on services that customers consider important, since those services considered important will form the basis of customer expectations (Sachdev & Verma, 2004: 93). Chang and Yeh (2002: 166) argue that this is particularly true in the airline industry, where customers find it difficult to differentiate between airlines that offer similar fares and frequent flier programmes. Therefore, the only way for airlines to survive in this highly competitive industry is to provide customers with services that meet and exceed their expectations.

PROBLEM IDENTIFIED

Customers form expectations through their dealings with businesses. Customer expectations can therefore be defined as the way in which customers believe a product or service offering will perform and the value that the product or service offering will provide them (Van Pham & Simpson, 2006: 1; Olsen, Teare & Gummesson, 1996: 167-168). Boshoff and du Plessis (2009: 40) add that customer expectations refer to the beliefs customers have about a product or service that the business will provide. Lovelock and Wirtz (2004: 37-38) suggest that customers will specifically seek out the business that will meet or exceed their expectations and satisfy their needs, indicating that expectations are often based on the previous experiences that customers have had with the business and will serve as reference points for future patronage.

Customer expectations include various service levels, namely the desired, adequate and predictive service level with a zone of tolerance to allow for deviations. Zeithaml, Bitner and Gremler (2009: 77) explain that a customers' *desired service level* refers to the highest service level that the customer hopes to receive, while the *adequate service level* refers to the service level that will be acceptable to the customer. Lovelock and Wirtz (2004: 40) describe the *predictive service level* as the service that the customer anticipates to receive. Grönroos (2004: 106) defines the *zone of tolerance* as a level at which customers are prepared to accept deviations in the quality of what they regard as acceptable – the zone of tolerance is therefore a level between the desired and adequate service level. Lovelock and Wirtz (2004: 40) and Olsen *et al.* (1996: 168-169) note that realistic customers understand that services cannot always meet or exceed their expectations, implying that customers are willing to tolerate a deviation in the service level and still find the service acceptable. Although this zone of tolerance allows for deviations in the service provided, customers will not accept any service level falling below the adequate service level. If customers perceive the service as falling below their adequate service level, customer dissatisfaction will ensue. Sultan and Simpson (2000: 191) add that by determining and meeting customer expectations, businesses are able to forecast profitability and improve their market share by ensuring customer satisfaction and increasing customer loyalty and retention levels.

Customer expectations play an important role in service industries such as the airline industry, where customer expectations will directly influence which services airlines need to offer (Aksoy, Atilgan & Akinci, 2003: 343). However, as Atalik (2007: 412) mentions, airlines' service levels often fall short of passenger expectations. Chang and Yeh (2002: 166) explain that this becomes problematic for airlines, since competition is ever increasing in the airline industry and that the only way in which airlines can remain competitive is by offering quality services. The main problem that airlines face in remaining competitive is the fact that most airline services are indistinguishable from one another, with most airlines offering similar fares and frequent flier mile programmes. Furthermore, very few airlines have established a reputation for providing quality services that satisfy customer expectations (Nejati, Nejati & Shafaei, 2009: 248).

From previous studies conducted in the airline industry, certain service elements that form part of customer expectations could be identified. These include elements such as food and beverage services, employees, on-board comfort, online services, in-flight activities, promotion, punctuality (on-time arrival and departure), reliability of service, convenience, baggage handling, airline safety and prices (Fodness & Murray, 2007; Park, 2007; Pryag, 2007; Hutt & Speh, 2004; Aksoy *et al.*, 2003; Gilbert & Wong, 2003; Chang & Yeh, 2002).

According to Campbell (2001), the South African domestic passenger airline industry plays a major role in the South African transportation and tourism industry and carry approximately eight million passengers a year. Even though this industry seems lucrative, it is characterised by strong competition and pressure, such as increased fuel costs and falling passenger demand (Steinmetz, 2009; ACSA, 2008; Tiernan, Rhoades & Waguespack, 2008: 213; Campbell, 2001). This emphasises the fact that airlines must deliver on passenger expectations to remain competitive in this volatile market. However, as Fodness and Murray (2007: 492) emphasise, airlines are unaware of the expectations their customers have. Van Pham and Simpson (2006: 3) add that very few airlines actually develop strategies that will allow airlines to meet customer expectations and satisfy customer needs.

Although some studies have been conducted on customer expectations in the airline industry, Gilbert and Wong (2003: 519) explain that research on airline passengers' expectations pertaining to service quality is limited. At the time of conducting this study, no studies could be found specifically dealing with passenger expectations from a South African domestic passenger airline perspective. Taking this and the importance of determining customer expectations as described above into consideration, it becomes important to investigate the underlying factors that passengers consider important when selecting a South African domestic passenger airline.

RESEARCH OBJECTIVES

The main purpose of this study was to determine the underlying factors passengers consider important when selecting a South African domestic passenger airline. The study therefore set out to achieve the following objectives:

- Determine the importance of individual service elements identified from literature within a South African passenger airline context; and
- Identify the underlying factors South African domestic airline passengers consider when selecting an airline to fly with.

RESEARCH METHODOLOGY

Sample

The sample was drawn by means of a non-probability convenience sampling method. A self-administered questionnaire was distributed to passengers flying on all domestic passenger airlines (1-Time, Kulula.com, Mango, Nationwide and South African Airways) at OR Tambo International Airport in Gauteng. Fieldworkers distributed the questionnaires to respondents over a period of two weeks outside holidays at various times during the day. The fieldwork was conducted outside of school holidays to ensure that the data would not be skewed towards one segment of the market (namely holidaymakers). Furthermore, the data was collected at different times during the day to accommodate the departure times of various airlines. Of the 405 distributed questionnaires, a total of 324 useable questionnaires were obtained (a realisation rate of 80%).

Measuring instrument

The measuring instrument used was a self-administered questionnaire distributed by trained fieldworkers. The questionnaire consisted of two main sections and included a screening question. The screening question aimed to ensure that only respondents who travel frequently (more than once a year) with a specific domestic passenger airline participated in the study. This was to ensure that respondents could form realistic expectations of the airline. The first section in the questionnaire aimed to determine what service elements respondents deem important when flying with a domestic passenger airline. This section contained 26 service statements identified from previous studies conducted in the airline industry as described in the problem statement, although Gilbert and Wong's (2003) study was used as basis due to its comprehensiveness pertaining to passenger expectations with airlines. The 26 service statements were measured on a four-point Likert-type scale (1 = not important; 4 = very important), with a fifth option being "not applicable". Respondents were asked to indicate how important each service-related statement was to them when selecting a domestic passenger airline. The second section in the questionnaire aimed to gather demographic information about respondents. The questionnaire was pre-tested among 30 respondents from the target population.

Data analysis

The results from the demographic section of the questionnaire were analysed by means of frequency analysis. Furthermore, the data obtained from the section pertaining to respondent expectations of service elements they consider important when selecting a domestic airline, was analysed by means of the Principal Component Factor Analysis technique. The 26 service statements were subjected to the factor analysis to determine

whether the statements could be reduced, and also to determine whether a logical configuration in the relationship between the various factors could be identified (Porkess, 2005: 94). Tucker and Maccallum (1997: 1) suggest that factor analysis can be used in an array of study fields including social sciences and business studies and entails finding structure and order within the data. Garson (2008) explains that factor analysis is “used to uncover the latent structure (dimensions) of a set of variables” and allows researchers to reduce the data into a smaller set of factors.

RESULTS

The following section provides an exposition of the sample profile and furthermore describes the results obtained from the importance of service elements to respondents when selecting a domestic airline in South Africa.

Sample profile

The sample profile allows for the profiling of the type of respondent participating in the study, and was determined in terms of gender, population group, age, education level, employment, with whom the respondent usually travels, the reason for travel, as well as who makes the decision as to which domestic airline will be used. The frequencies (F) relating to each of these variables are presented in Table 1.

TABLE 1 **RESPONDENTS’ DEMOGRAPHIC INFORMATION**

Demographic variables		F	%
Gender	Male	181	55.9
	Female	143	44.1
Population group	Asian / Indian	16	4.9
	Black	62	19.1
	Coloured	31	9.6
	White	215	66.4
Age	Younger than 20 years old	21	6.5
	20-30 years old	107	33.0
	31-40 years old	105	32.4
	41-50 years old	65	20.1
	51-60 years old	20	6.2
	61 years old and older	6	1.9
Highest level of education	Primary school	5	1.5

	High school	61	18.8
	Diploma	103	31.8
	University degree	104	32.1
	Post-graduate degree	51	15.7
Level of employment	Full-time employed	205	63.3
	Part-time employed	22	6.8
	Pensioner	5	1.5
	Self-employed	43	13.3
	Student	42	13.0
	Other	7	2.2
Whom respondents usually travel with	Alone	143	44.1
	With family	75	23.1
	With friends	21	6.5
	With colleagues	85	26.2

Table 1 continued

Demographic variables		F	%
Reason for travel	Business	170	52.5
	Tourist / holiday	100	30.9
	Visiting friends / relatives	47	14.5
	Other	7	2.2
Decision-maker	Business policy	80	24.7
	Family member	38	11.7
	Travel agent	38	11.7
	Passenger	160	49.4
	Other	8	2.5

The sample profile presented in Table 1 indicates that the majority of respondents were male (55.9%); between the ages of twenty and forty (65.4%); have a post-matric qualification (79.6%); and are employed on a full-time basis (63.3%). Furthermore, the majority of respondents travel alone (44.1%) and for business reasons (52.5%). Just under half (49.4%) of respondents make their own decision pertaining to the airline they fly with.

Importance of service elements

Before the factor analysis was done, a frequency analysis was done on the data to determine which of the 26 service statements presented in the questionnaire respondents consider important when selecting a domestic passenger airline. Table 2 shows the frequency and percentage of respondents who stated that the service item was important as well as the mean. The mean was calculated on a four point Likert scale where 1 = not important at all and 4 = very important.

TABLE 2 IMPORTANCE OF SERVICE ELEMENTS

Item	Service element	Importan t		Mean*
		F	%	
1	Quality food and beverages are provided during the flight	220	67.9	2.88
2	The domestic airline has convenient flight schedules	301	92.9	3.58
3	The aircraft has comfortable interiors (e.g. seats)	301	92.9	3.44
4	The airline has comfortable waiting lounges	222	68.6	3.00
5	Employees of the airline appear neat and tidy	305	94.1	3.45
6	The service is performed right the first time	307	94.8	3.54
7	The promises made in advertising campaigns are kept	294	90.7	3.47
8	Employees of the airline have knowledge to answer your questions	293	90.4	3.48
9	Employees of the airline offer you prompt service	313	96.7	3.52
10	Employees of the airline understand your needs	308	95.1	3.48
11	Employees of the airline are never too busy to respond to your request or complaint	309	95.4	3.50
12	Employees of the airline are consistently courteous	311	96.0	3.52
13	Employees of the airline are always willing to help	307	94.7	3.54
14	The flight departs and arrives on time	307	94.7	3.75
15	Consistent ground services	293	90.5	3.46
16	Consistent in-flight services	304	93.9	3.47
17	You feel safe when you fly	303	93.5	3.83
18	The ability to purchase tickets on-line (on the Internet)	282	87.0	3.60
19	The ability to track flights and schedules on-line	274	84.6	3.50
20	The ability to check in on-line	272	83.9	3.50
21	The airline offers additional services (e.g. air/accommodation/car hire packages)	231	71.3	3.13

22	The airline has efficient check-in services	297	91.6	3.56
23	The airline has sufficient (enough) check-in services	293	90.5	3.52
24	The airline has efficient baggage handling services	288	88.9	3.49
25	The airline has sufficient baggage handling services	297	91.7	3.49
26	Low prices of tickets	294	90.7	3.61

* calculated on a four point scale where 1 = not important at all and 4 is very important.

From Table 2 it can be observed that the service elements most respondents consider **important** (96.7%, 96.0%, 95.4% and 95.1% respectively) include: employees of the airline offer prompt service (mean = 3.52); employees of the airline are consistently courteous (mean = 3.52); employees are never too busy to respond to requests or complaints (mean = 3.50); and employees of the airline understand respondent needs (mean = 3.48). On the other hand, service elements that respondents consider **least important** when selecting a domestic airline include: quality of food and beverages that are provided during the flight (mean = 2.88); the airline has comfortable waiting lounges (mean = 3.00); and the airline offers additional services (mean = 3.13), with the lowest number of respondents stating that the service element was important (67.9%, 68.8% and 71.3% respectively).

Since the main purpose of this paper is to determine the underlying factors respondents consider important when selecting a domestic passenger airline in South Africa, the 26 service items were subjected to a factor analysis.

Factor analysis

For the purpose of this study, the Principal Component Analysis extraction method was used to detect patterns in the data, since this is an exploratory study (Buckingham & Saunders, 2004). In order to determine the suitability of the data for factor analysis, the data was subjected to a correlation matrix, the Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity tests. The correlation matrix revealed that most of the coefficient values had a value of 0.3 and above. Furthermore, the KMO measure of sampling adequacy revealed a value of 0.913, which exceeds the recommended value of 0.6 (Kaiser, 1970 & 1974). Bartlett's Test of Sphericity revealed a statistically significant result of .000 (Bartlett, 1954). The data is therefore suitable for factor analysis.

Results from the Principal Component Analysis showed four components with eigenvalues above 1. The first component explained 45.4% of the variance, with components two, three and four explaining 7.9%, 6.4% and 5.5% of the variance, respectively. Further inspection of

the scree plot resulted in all four factors being retained for further analysis, which explained 65.3% of the variance. As part of the Principal Component Analysis, the Oblimin with Kaiser Normalisation rotation method was used to explain as much of the variance as possible for a better interpretation (Aaker, Kumar & Day, 2003: 570-571). Garson (2008) explains that rotations are used in factor analysis so as to make the output more understandable and enable better interpretation of the factors.

Each item forming part of the four factors identified include factor loadings that indicate how well the item correlates with each factor (Bradley, 2007: 336). These factor loadings are used as basis for interpreting the factors, since high loadings indicate that the factor is strongly influenced by the item (Tucker & Maccallum, 1997: 14). In this study, factor loadings ≤ 0.3 were omitted, as suggested by Blaikie (2004: 221-222) and Kline (2004: 6). Table 3 presents the results of the factor analysis in terms of the factor loadings obtained from each item tested in the questionnaire pertaining to the importance of service elements to respondents.

TABLE 3 RESULTS OBTAINED FROM FACTOR ANALYSIS IN TERMS OF THE IMPORTANCE OF SERVICE ITEMS TO RESPONDENTS

Item no	Service item description	Factor loadings			
		Factor 1	Factor 2	Factor 3	Factor 4
11	Employees of the airline are never too busy to respond to your request or complaint	.832			
9	Employees of the airline offer your prompt service	.822			
8	Employees of the airline have knowledge to answer your questions	.821			
12	Employees of the airline are consistently courteous	.817			
13	Employees of the airline are always willing to help	.805			
10	Employees of the airline understand your needs	.742			

6	The service is performed right the first time	.604			
7	The promises made in advertising campaigns are kept	.533			
16	Consistent in-flight services	.440			
5	Employees of the airline appear neat and tidy	.427			
14	The flight departs and arrives on time	.424			
17	You feel safe when you fly	.419			
20	The ability to check in on-line		.913		
19	The ability to track flights and schedules on-line		.889		
18	The ability to purchase tickets on-line (on the Internet)		.887		
26	Low prices of tickets		.398		
23	The airline has sufficient (enough) check-in services			-.974	
24	The airline has efficient baggage-handling services			-.938	
25	The airline has sufficient baggage-handling services			-.903	
22	The airline has efficient check-in services			-.821	
15	Consistent ground services			-.600	
2	The domestic airline has convenient flight schedules			-.589	
1	Quality food and beverages are provided during the flight				.724
4	The airline has comfortable waiting lounges				.659
3	The aircraft has comfortable interiors (e.g. seats)				.543
21	The airline offers you additional services (e.g. air /				.362

accommodation. Car hire packages)				
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From Table 3 it can be determined that **Factor 1** involves items concerning the services provided by airline employees with seven service elements pointing to the airlines' employees. Specifically, the items that pertain to service include employees of the airline are consistently courteous; employees of the airline are always willing to help; employees of the airline have knowledge to answer respondents' questions; and employees of the airline are never too busy to respond to respondents' requests or complaints. Furthermore, other items that can also be linked to the services performed by employees include that the service is performed right the first time, and consistent in-flight services. The other three items include that promises made in advertising campaigns are kept; that respondents feel safe when they fly and that the flight arrives and departs on time. Considering the underlying items, **Factor 1 can be labelled as service offered by airline employees; departing and arriving on time and feeling safe when flying.**

The items with high factor loadings on **Factor 2** in Table 3 include on-line services (such as checking in on-line, tracking flights on-line and purchasing tickets on-line). Additionally, low prices of tickets also load onto this factor – this could possibly be linked to the fact that many airlines offer lower prices on-line. This item, however, only has a factor loading of 0.398 and will therefore not greatly influence the labelling of this factor. **Factor 2 can therefore be labelled as on-line services offered by domestic airlines.**

Factor 3 in Table 3 includes the services provided by the domestic airline, such as check-in, baggage handling, ground service, and flight schedules. By considering the items comprising Factor 3, it appears as though this factor predominantly focuses on the check-in related services offered by the domestic airline. Other items contributing to Factor 3 include consistent ground services and convenient flight schedules. Considering these items and the factor loading of each item, **Factor 3 can be labelled as check-in related services as well as convenient flight schedules provided by airlines.**

Factor 4 in Table 3 includes a variety of service items, including the quality of food and beverages that are provided during the flight; the airline has comfortable waiting lounges; the aircraft has comfortable interiors and the airline offers additional services. Two of these items (waiting lounges and comfortable interiors) highlight the need for comfort. The quality of food and beverages provided during the flight could arguably also indicate comfort as these items could enhance a passenger's comfort during the flight. Likewise, the item "offers

additional services” could also contribute to passengers’ comfort by making it easier for passengers to acquire related services. It is also apparent that these items deal with services offered to passengers after they have checked-in their luggage. **Considering these items, Factor 4 can be labelled as comfortable post check-in services as well as supplementary services offered by the airline.**

Reliability of factors

Sapsford and Jupp (2006: 111 & 121) explain that the Cronbach Alpha statistic in factor analysis is calculated to determine the correlation between items in a scale and is used to determine the internal validity of the data. The Cronbach Alpha ranges between 0 and 1, where a Cronbach Alpha value of 0.6 is acceptable, but a value of 0.7 is preferred, since it indicates a higher level of reliability (Bagozzi, 1994: 18). Table 4 indicates the Cronbach Alpha values obtained for the four factors described above.

TABLE 4 **CRONBACH ALPHA VALUES ASSOCIATED WITH THE FACTOR ANALYSIS IN TERMS OF THE IMPORTANCE OF FACTORS TO RESPONDENTS**

Factor	Factor name	Cronbach Alpha
1	Service offered by airline employees, departing and arriving on time and feeling safe when flying	0.915203
2	On-line services offered by domestic airlines	0.828595
3	Check-in related services as well as convenient flight schedules provided by domestic airlines	0.941147
4	Comfortable post check-in as well as supplementary services offered by the airline	0.781639

The Cronbach Alpha values as presented in Table 4 indicate a high level of reliability between elements in the scale, since each value is > 0.7.

MANAGERIAL IMPLICATIONS AND RECOMMENDATIONS

The results obtained from the data analysis show that respondents place varying levels of importance on service items provided by domestic passenger airlines in South Africa. This indicates that passengers have differing expectations pertaining to services provided by domestic passenger airlines. From the four underlying factors that emerged from the data

analysis, it can be noted that respondents place different emphasis on the various services offered by domestic passenger airlines. The results indicate that respondents consider the services offered by airline employees, departing and arriving on time and feeling safe when flying as most important when selecting an airline (i.e. respondents had the highest expectations pertaining to these elements). Respondents also have high expectations of the on-line services provided by domestic airlines. This could be due to the convenience and lower prices offered by airlines' on-line websites. The third underlying factor that emerged pertained specifically to check-in related services and the convenient flight schedules offered by domestic airlines. The final underlying factor pertained to comfortable post-check in and supplementary services (such as providing air/accommodation/car hire packages) offered by the domestic airline.

The recommendation that can be made from this study is that domestic passenger airlines in South Africa should focus on those service elements that passengers consider most important when planning their service offerings (specifically the four underlying factors identified in this study). Passengers need to be aware of the services that airlines offer, meaning that these four factors should be included in the marketing strategies that are designed and implemented by airlines. It is furthermore important that airlines deliver on these expectations, since as found from the literature review, delivering on customer expectations will enable the business to satisfy customers, which can lead to increased customer loyalty and retention (Sultan & Simpson, 2000: 19).

LIMITATIONS AND FUTURE RESEARCH

Since this study is only based on one set of data collected by means of a convenience sample, the results are restrictive to the respondents who participated in the study and cannot be extended to the greater population. The research was also only conducted at only one airport in South Africa (OR Tambo International Airport). These limitations present the need for further research where it will be necessary to determine whether the results can be repeated using a larger sample where questionnaires are distributed to all domestic airports in South Africa. This can lead to a standardised measuring instrument being developed for the airline industry of South Africa. The results of this study could also be tested with specific markets within the airline industry, such as passengers flying for business compared to those flying on holiday to determine which expectations specific market segments may have.

CONTRIBUTION OF THE STUDY

The value of this study lies therein that it determined the underlying factors respondents flying with domestic passenger airlines in South Africa consider important when selecting an airline. By focusing on the identified factors, domestic airlines will be able to compete in the increasingly competitive industry and will be in a better position to satisfy passenger needs, thereby increasing customer retention. This study will also aid with future studies where a possible standardised measuring instrument can be developed for the airline industry, which could possibly be adapted for other areas within the hospitality and tourism industry.

CONCLUSIONS

From the literature review it was determined that identifying customer expectations is vital for businesses aiming to gain a competitive advantage. This is particularly true in the airline industry where the market is highly competitive and subjected to decreasing demand. From the results, it can be concluded that respondents flying with domestic passenger airlines in South Africa consider four underlying factors as important when selecting an airline to fly with. These factors should specifically be considered by airline management and implemented in the airlines' marketing strategies, since this could influence customer satisfaction, loyalty and retention levels.

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CAUSALITY BETWEEN EMPLOYEE ENGAGEMENT AND THE CUSTOMER EXPERIENCE WITHIN THE CONTEXT OF ORGANISATION CULTURE AND CLIMATE

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ABSTRACT

This paper describes employee engagement as the amount of energy in an organisational system to perform business activities. Positive levels of engagements will result in organisational benefits. The pre-requisites of creating engagement in organisations are explored as it has direct correlations with business measurements such as customer centricity. Further, customer experience is described as an imperative and distinguishing business factor. The pre-requisites of a positive customer experience are presented.

Dr Adri Drotskie contributes research and theory on customer experience and Dr Rica Viljoen focuses on employee engagement research and theory. The two researchers argue that there is a critical causality between employee engagement and customer centricity and present an Integrated Systemic Customer centricity Framework that deals with the pre-requisites of both constructs.

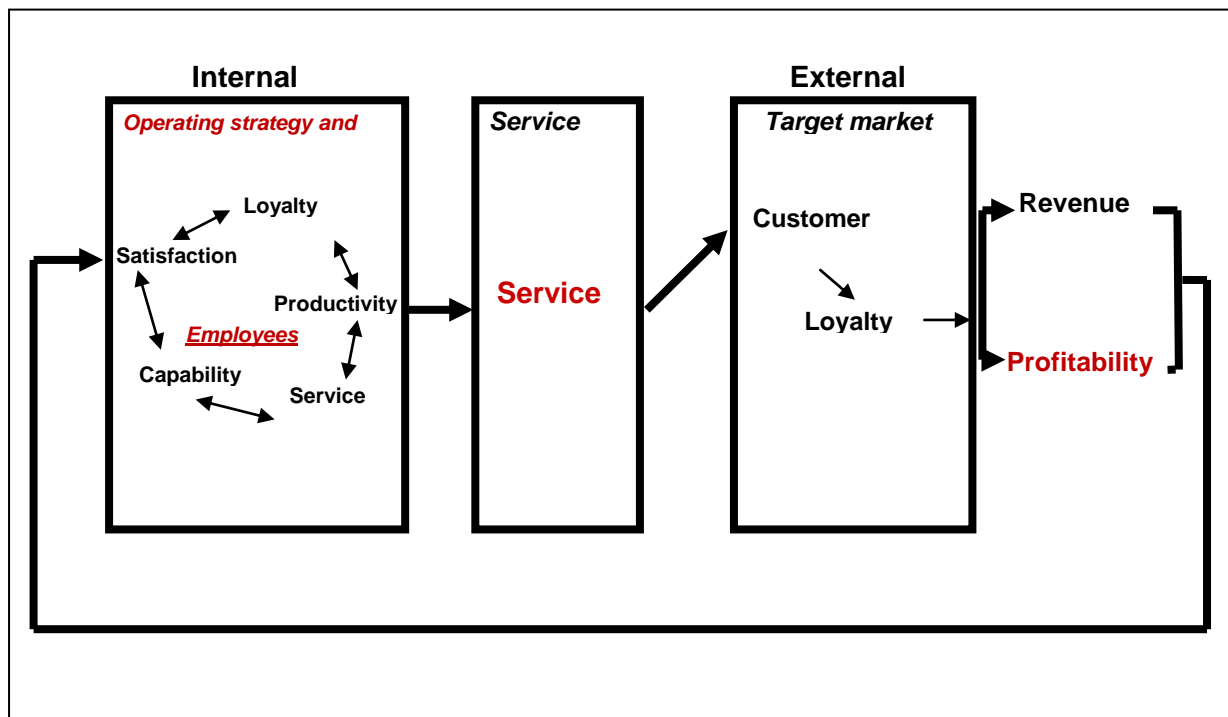
Through grounded theory methodology the framework that is presented in this paper emerged. Engagement determined by factors on individual, group and organisational level, translates into customer experience. The higher the level of engagement of the employees, the more positive impact the experience is in the world of the customer.

INTRODUCTION

Customer experience is seen as a strategic differentiator in organisations interacting with customers, leading to a competitive advantage and changes in profitability. The customer experience however is the effect of the employee engagement approach within the organisation (Drotskie, 2009). Therefore, the employee experience leads to the customer experience. As the customer experience is the effect of something it cannot be directly changed in itself. The root cause leading to the effect of a change in customer experience is the employee experience, which comprises employee engagement. Employee engagement is determined by the interplay of perceptions on individual, group and organisational level (Viljoen, 2009).

In Figure 1 below, Heskett, Sasser and Schlesinger (1997) depict the customer service profit chain which indicates that the changes inside the organisation (people, processes and systems) leads to a certain value proposition which leads to a change in the customer experience which leads to profitability.

Figure 1: The service profit chain



Source: Adapted from Heskett, Sasser & Schlesinger, 1997: 19

It is clear from figure 1 above that employee satisfaction will impact on the service value that will directly impact on customer satisfaction. Since 1997, the field of employee satisfaction developed and employee engagement is currently view as significant contributor to organisational success. Similarly customer satisfaction developed into a much more refined construct namely customer centricity. The interplay between employee engagement, and customer centricity will be explored next.

PROBLEM INVESTIGATED

The impact of climate and culture

An awareness of underlying mental models and assumptions becomes increasingly important. Intra-personal skills, as defined by Bar-On (2005), become critical. This is confirmed by the following statement by Smircich and Calas (1989: 228), “The imagery of the global village fosters a somewhat less ethnocentric posture ... one that promotes introspection”. It makes sense to become aware of the culture and climate in organisations and the conscious and unconscious dynamics that it creates.

Good organisational improvement begins with good diagnosis (Howard, 1994). Tagiuri stated as early as 1968 that one dimension only of climate is often addressed and that this has negative effects (Viljoen, 2009). Mills (1993) identified three crucial factors that should be reflected in studies on organisational culture, namely, the relationship between societal

values and organisational behaviour, the importance of powerful factors in the development of this value system, and the significance of the organisation as a subjective experience.

Deal (1986) and Schein (1986) were of the belief that culture should be analysed by means of qualitative methods. The researchers of this paper is in strong agreement with this view as the unique story of each organisation and the way in which members present this story, is critical in the understanding of the culture.

Cooke and Rousseau (1988) and Ouchi and Wilkons (1985) also contributed to the argument and discussed the appropriateness of quantitative research on culture. Hofstede, Neuijen, Ohayv and Sanders (1990), Rousseau (1990) and Denison and Mishra (1995) argued that both qualitative and quantitative methods could be used in the measurement of culture. Botha and Schutte (2003) developed two models, namely, the customer excellence survey (CES) and the SafeHuman. The constructs of the two models are similar, but the outcomes are adapted for two different environments, namely, the service environment and the production environment. According to the CES, climate and culture should be studied simultaneously in order to gain a better understanding of organisational dynamics (Botha & Schutte, 2003).

Linking organisational culture and climate to customer experience

An understanding of the external environment (in this case the world of the customer) may assist in creating insights, reawakening instincts and cultivating organisational change. Schutte (2004) explored the impact of happenings in the internal environment on the external environment. Jung (1953) years ago held similar beliefs and based his insights on the age-old alchemy paradox - "*as within so without*". If a person or an organisation would like to address something in the external environment, the real work must happen internally. Mutwa, Teish and Larsen (2003) described the same duality, namely, if people treat each other with trust within the internal environment then they will also treat customers in the same way. Customers appreciate an organisation that encourages the truth through customer feedback and then addressing all customer problems honestly (McKenna, 1991).

This paper therefore investigates the causality between measuring and understanding the organisational culture and climate and measuring and understanding the customer experience. As employee engagement within the context of organisational culture and climate causes the customer experience to change, this causality is of utmost importance for management understanding.

RESEARCH OBJECTIVES

The research objectives are:

- Explore the pre-requisites for improved employee engagement
- Explore the pre-requisites for a changed customer experience
- Determine the causality between employee engagement and customer experience

LITERATURE REVIEW

In this section of the paper, employee engagement within the context of organisational culture and climate and the customer experience are reviewed as two separate concepts.

Organisational culture and climate

“If the leadership dimension isn’t properly in place, a company simply cannot be successful. Organisations do not run by themselves. They need people – the right people in leadership positions to make them perform.”

Kets de Vries, 1984: unknown

It is assumed that organisations are social systems (French & Bell, 1999). Different employees often see the same thing but interpret it differently based on their own unique way of thinking (Salisbury, 1999). Therefore, in order to understand the way in which decisions are made and strategies implemented within an organisation, one would need to acknowledge and understand how employees within the organisation view the system and what constitutes their worldviews. It thus becomes critical for the leadership within an organisation to firstly value diversity and secondly ensure that all employees contribute significantly to the implementation of the organisational strategy thereby ensuring enhanced shared understanding and alignment (Viljoen, 2009). **A culture, thus a system of shared meanings**, may guide the way in which organisations act and the way in which individuals view and interpret the corporate world (Novinger, 2001). Schein (1985), Meek (1988) and others believed that a leader creates culture.

Wheatly (1992) stated that, in order to change a culture, the new ideas and beliefs should be communicated to all the members. Schein (1985, 1992) believed that leaders both create and are able to change the culture of both their team and their organisation. Although the changing of a culture requires a systemic approach Meek (1988) argued that the leader is the appropriate person to introduce a new direction. Gershon, Stone, Bakken and Larson (2004) maintained that organisational cultural aspects should be communicated, and

stressed the importance of congruent behaviour. Brown, Denning, Groh and Prusak (2005) passionately argued that through conversation the realities of life could be transformed and pleaded for leaders to engage in dialogue on strategic matters.

The way in which things are done in an organisation will contribute to how employees experience the workplace (Viljoen, 2009). **A climate (a shared set of attitude in human affairs)** conducive for engagement, involvement and participation should be engendered by leadership within the organisation (Botha and Schutte, 2003) to customer satisfaction. Organisational benefits will materialise from such a climate.

The philosophy of engagement

Benson (1999) described the true meaning of commitment as the ability to commit with passion to a noble pursuit. Engagement can be described as “*the act of committing, pledging or engaging oneself*” or “*the state of being bound emotionally or intellectually to a course of action or to another person or persons*” (Macey & Schneider, 2008:3).

Macey and Schneider (2008) offers a comprehensive description of engagement and describes it as discretionary willingness. An engaged employee is a person who is fully involved in, and enthusiastic about, his and her work. Viljoen (2009) defined engaged commitment as “*the trait of sincere and steadfast fixity of purpose, a man of energy and commitment*” and “*the act of binding oneself to a course of action*”.

In the model that will be presented in figure 2, commitment is viewed as the emotional experience of the phenomenon engagement. Employee engagement, thus, is a concept that is generally viewed as managing discretionary effort, that is, when employees have choices, they will act in a way that furthers their organisation’s interests.

Statistics have shown that only 29% of employees are actively engaged in their jobs (Leadership Council, 2004). These engaged employees work with passion and feel a profound connection to their company. People that are actively engaged help move the organisation forward. A total of 84% highly engaged employees believe they can positively impact the quality of their organisation's products, compared with only 31% of the disengaged. 72% of highly engaged employees believe they can positively affect customer service, versus 27% of the disengaged. 68% of highly engaged employees believe they can positively impact costs in their job or unit, compared with just 19% of the disengaged. It is clear that in employee engagement has positive impacts on business results such as customer service.

Engaged employees feel a strong emotional bond to the organisation that employs them (Viljoen, 2009). This is associated with people demonstrating willingness to recommend the organisation to others and commit time and effort to help the organisation succeed. It suggests that people are motivated by intrinsic factors (e.g. personal growth), working to a common purpose, being part of a larger process) rather than simply focusing on extrinsic factors (e.g., pay/reward) (Leadership Council, 2004).

High correlations were found between talent retention and levels of engagement. The Leadership Council (2004) provided a quantitative analysis of effective engagement strategies in a report on driving performance and retention through employee engagement. Employee engagement is defined in this report (Leadership Council, 2004) as the “*positive emotional connection to an employee’s work, thus affective, normative and continuance commitment*”. According to this report engaged employees are inspired to go above and beyond the normal call of duty in order to exceed organisational goals and that engagement can contribute to an increase in total share holder return of up to 47% through the reduction of absenteeism, enhanced customer feedback, less shrinkage of inventory and higher sales achievements (Leadership Council, 2004).

Except for limited efforts on the part of Jackson (2004), Katz and Miller (2003) and LeBaron (2005) no academic research could be found that either positions the concept of inclusivity as a radical transformational strategy as proposed by Viljoen (2009). This paper aims to contribute to the emergence of insights on engagement and inclusivity and how it manifests in organisational success indicators such as customer centricity. In specific pre-requisites for engagement are identified.

Customer experience

Over the past few years, there has been an increasing trend towards creating “experiences” for customers, particularly for those in the services sector. Because of this trend, authors such as Pine and Gilmore (1999:ix-x) are of the opinion that the service economy has been transformed into an attention economy, an entertainment economy, a dream society, an emotion economy or an experience economy. As the commoditisation of many service offerings continues, organisations have to devise new ways to achieve a competitive advantage, and in particular by focusing on the design and management of customers’ experiences. Experiences are inherently emotional and personal (Pullman & Gross, 2003:215).

To compete successfully in the customer experience territory, a growing number of organisations are systematically applying the principles and tools of total customer experience (TCE) to generate, strengthen and sustain enduring customer loyalty. Marketers today believe that engineering TCE and lasting customer loyalty are important in maintaining a customer focus and in creating customer preference (Mascarenhas, Kesavan & Bernacchi, 2006:397).

Organisations that apply total customer experience principles have the following features in common (Mascarenhas, et al., 2006:398-399):

- Anticipating and fulfilling customer needs and wants better than competitors do.
- Providing real customer experiences.
- Providing a real emotional experience.
- Providing experience as a distinct market offering.
- Utilising experiences as interaction.
- Changing experiences into engaging memories.

These principles listed above imply the customer experience is applied throughout the organisation. The customer experience is in the DNA of the organisation – its people, processes and architecture, thus the organisational culture.

It is clear from the many definitions of customer experience (Drotskie, 2009) formulated over time that the total customer experience is a concept that evolved over time to become a systemic and holistic concept focused on the customer. It is about a “human” interaction and therefore the emotions of customers are a vital part of an experience.

Drotskie (2009) accepts the definition by Seybold (2002:108) namely “a total customer experience is a consistent representation and flawless execution, across distribution channels and interaction points, of the emotional connection and relationship you want your customers to have with your brand” encompasses all the most important aspects of the total customer experience and is therefore adopted for this paper.

The customer experience is felt in all interactions with an organisation and therefore it is important to understand that customers interact with an organisation through various means and the experience must always be the same. This is true for any services organisation, for example financial services.

From the definition of total customer experience given above it is clear that a total customer experience consists of a variety of elements.

The following key elements of customer experience are entrenched across the organisation (Shaw, 2005: xix), namely strategy, culture, customer expectations, processes, channel approach, marketing and brand, systems, people and measurement.

According to Shaw (2005:xix), each of these elements represents an area in the organisation that has an extensive effect on customer experience.

RESEARCH METHODOLOGY

The method of research applied in this paper is grounded theory.

The methodology of grounded theory was originally developed by Glaser (1978, 1992) and Strauss (1987) (Glaser & Strauss, 1967). Strauss (1987) who was influenced by Hughes (1956) and Blumer (1969), contributed to the methodology by highlighting the need for field research in order to develop a discipline as the basis for social action, and to acknowledge the complexity and variability of both phenomena and of human action. He stressed the belief that individuals are actors who assume roles in response to problems and that they act from a basis of meaning. The importance of an awareness of the interrelationships between conditions, actions and consequences was highlighted. Glaser (1978, 1992) identifies the need for comparisons of data in order to identify, develop and relate concepts.

Strauss (1990) and Corbin (1991), describe an axis coding process for the development of **grounded theory**. This approach may be used during theory construction to "*think systematically about data and to relate them in very complex ways*" (Strauss & Corbin, 1990: 99). During axial coding the researcher attempts to identify which types of phenomena, contexts, and causal and intervening conditions and consequences are relevant for the domain under study. Axial coding may be viewed as evolving out of the work of Strauss and Glaser (Strauss and Corbin, 1998).

Strauss and Corbin (1998: 12) describe grounded theory as "theory that was derived from data, systematically gathered and analysed through the research process. In this method, data collection, analysis, and eventual theory stand in close relationship to one another". Charmaz (2006: 2) states that grounded theory "consists of "systemic, yet flexible guidelines for collecting and analysing qualitative data to construct theories grounded in the data

themselves". The methodology followed in this study was strongly influenced by both the approaches of Stauss (1990) and of Charmaz (2006) in respect of building emergent theory.

Kelle (2005) stresses the importance of the integration of previous knowledge and new empirical observations during any scientific discovery process. It is important that "this style of inquiry should be supplemented by strategies of further corroboration of the empirically contentful categories and propositions developed in the ongoing course of theory building" (Kelle, 2005: 15).

Typically, research content is sorted into clusters depending on the type of content. Themes are defined as units, which are derived from patterns such as "conversation topics, vocabulary, recurring activities, meanings, feelings or sayings and proverbs" (Taylor & Bogdan, 1984: 131). Themes are identified by "bringing together components or fragments of ideas or experiences which often are meaningless when viewed alone" (Leininger, 1985: 60). Themes that emerge from the informants' stories are pieced together to form a comprehensive picture of their collective experience. The "coherence of ideas rests with the analyst (who has rigorously studied how different ideas or components fit together in a meaningful way when linked together)" (Leininger, 1985: 60). Constan (1992: 258) reiterated this point and stated that the "interpretative approach should be considered as a distinct point of origination".

Two frameworks emerged from the grounded theory approach, applied by the researchers to determine a measurement approach to explore employee engagement and customer experience.

Pre-requisite of employee engagement

The next step in content analysis involves combining and cataloguing related patterns into sub-themes. Patterns emerge when sub-themes are gathered in order to obtain a comprehensive picture of the information. These patterns may be tested with the interviewees. In this research stories emerged that had influenced the researcher's understanding of the phenomenon of inclusivity and, throughout the research process; the questions had been adapted slightly in order to test for new insights.

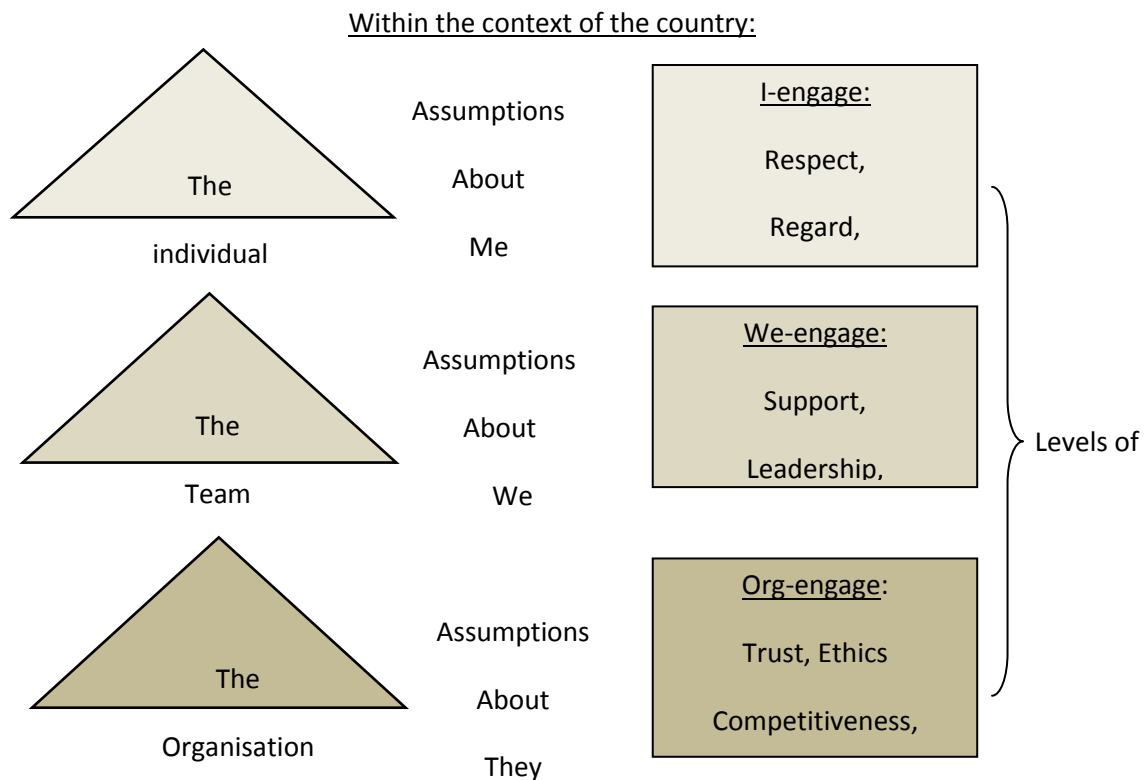
The researcher adapted a technique of Strauss and Corbin (1998, xiii) to classify data. Usually a coding scheme is then devised in basic terms such as frequency (amount of content), direction (to whom the content is directed), intensity (power of content), and space (size of content). According to Strauss et al (1998) in the case of grounded theory the focus is on open coding – the analytical process through which concepts are identified and their

properties and dimensions discovered in the data – then axial coding – “the process of relating categories to their subcategories, termed axial because coding occurs around the axis of a category, linking categories at the level of properties and dimensions” (Strauss et al: 123); and, ultimately, selective coding – the process of integrating and refining the theory.

Categories are considered to be saturated when new data gathered no longer leads to new theoretical insights, neither does it reveal new properties in respect of the core theoretical categories (Charmaz, 2006). Ultimately, the insights gained are tested against, integrated into and presented in the Engagement Framework. A valid argument is then constructed for the choice of the themes. This is carried out by studying relevant literature. By referring back to the literature the interviewer amasses valuable information that allows inferences from the interview to be drawn. Once the themes have been collected and the literature studied the researcher is ready to formulate the theme statements with which to develop a story line. In common with Charmaz (2006) and Guba and Lincoln (1982) the researcher assumed that this paper, like any other theoretical effort, offers an interpretive portrayal of the world in question and not an exact portrayal of this world. In terms of the grounded theory, which was utilised priority was given to the phenomenon of engagement and customer centricity, rather than to the setting itself.

The themes that emerged as pre-requisites of engagement are clustered on individual, group and organisational domain through grounded theory methodology. It was clustered as I-engage factors – factors needed on individual level to engage; We-engage factors – factors needed on group domain to engage; and Org-engage factors – factors on organisational level needed to engage (Viljoen, 2009). These pre-requisites are displayed in figure 2.

Figure 2: Pre-requisites of Engagement



Source: Viljoen, 2009

It is not the intent of this paper to define the different factors as described in this figure. What is important is how employees in the organisation experience and describe the factors and not how the researchers define it. Individuals and groups in organisations should engage around these factors and identify what is important for that specific system, and plan around it.

As depicted in figure 2 above, the pre-requisites of employee engagement can be described as a synthesis between the following constructs:

- **Respect** refers to an assumption/showing of good faith and value towards another person.
- **Regard** refers to having a positive self-view and self-awareness. It further refers to both the perceived weak and strong points of an individual and how he or she deals with it.
- **Responsibly** refers to the extent to which an individual takes accountability for his or her behaviour.

- **Support** refers to the extent that individuals feel encouraged, cared for and assisted by others.
- **Supervisor leadership** refers to the leadership capability that is needed by managers to effectively manage and lead employees. It also specifically applies to the depth of leadership on supervisory level as effectiveness on this level has a direct impact on the achieving of organisational goals.
- **Diversity** refers to the degree to which diversity of thought; race, gender, age, language and nationalities are valued.
- **Accountability** refers to the degree to which an individual is held responsible for his or her contribution and behaviour by their team.
- **Trust** refers to the degree to which the intent of others is believed to be authentic and pure.
- **Alignment** refers to the degree to which teams have shared understanding of the values of the organisation and the strategy of the organisation.
- **Change resilience** refers to the ability of the organization and individuals to deal with change effectively
- **Inclusivity** refers to the degree to which an individual feel that they are been made part of the organisation. The practice of co-creating plans and strategies are utilised.
- **Ethics** refers to the sense of the individual that the right things are done in the organisation

The descriptions above crystallised from the Grounded Theory approach.

Leaders in organisations must create a space in which the wisdom, insights and gifts – the skills for which the individual was employed in the first place – are brought to the organisational table in order to create an environment in which diverse views, paradigms and perspectives may create a synergistic, sustainable outcome that manifests in organisational benefits such as optimal customer experience (Viljoen, 2009).

A climate of **inclusivity** in which differences are not only allowed, but are valued and promoted, becomes imperative. The concept of inclusivity is still relatively ill described and has not been well documented or researched (Viljoen, 2009). Should the views of Senge (1993) be integrated with those of Beck and Cohen (1996). Beck and Cohen (1996) argued convincingly that high quality of leadership is needed in both South Africa and Africa as a continent to unleash the potential of the diversity of the continent. Through inclusivity the

benefits of diversity can materialise and organisational realities such as diverse customer needs can be met.

Some definitions in respect of the concept of Inclusion as it pertains to diversity may be found in educational theory, gender studies and the field of religion. Almost no literature was found on the topic of inclusivity as organisational transformational methodology. Except for the definition found in the online encyclopaedia, Wikipedia (academic reputation still questionable), no other definition for the concept of inclusivity could be found (Viljoen, 2009). Viljoen (2009: 16) defined inclusivity as:

“A radical organisational transformational methodology which aligns the doing and the being side of the organisation around commonly defined principles and values, co-created by all.”

In this paper the researchers argue that through a process of inclusivity, employees can co-create strategies on customer experience and on values that will manifest in employee engagement and ultimately a positive customer experience.

Inclusivity releases **energy in a system**, which may then be used for performance. Energy, according to scientific laws, may be classified as positive, neutral or negative. Einstein taught that it is not possible to destroy energy, although, friction may cause energy to decrease – the principle of entropy. Energy may, however, be transformed from one form to another (Oxtoby & Nachtrieb, 1996). Emotions may be described as forms of energy (Middelton-Moz, 2000). In a climate of inclusivity the energy in the system may be perceived as positive.

If there is a climate of inclusivity in an organisation engagement is optimal (Viljoen (2009). Everybody is involved and shares their different viewpoints, non-performance is not tolerated and employees assume personal authority. There are high levels of support, trust and respect. Leadership may be humane and vulnerable as mistakes may be shared and speedily resolved. The energy in the system is in a virtuous cycle and all the emotions mentioned in this context again reinforce the climate of inclusivity. This will result in a positive customer experience.

In a system in which the energy to perform is negative a vicious cycle will exist. People will not feel that they are trusted, supported and respected. Therefore, individual defence mechanisms will come into play and group dynamics will become destructive. In fighting will take place, people will withdraw and power plays and political gamesmanship will be commonplace. It will not be possible to share personal emotions without penalties being

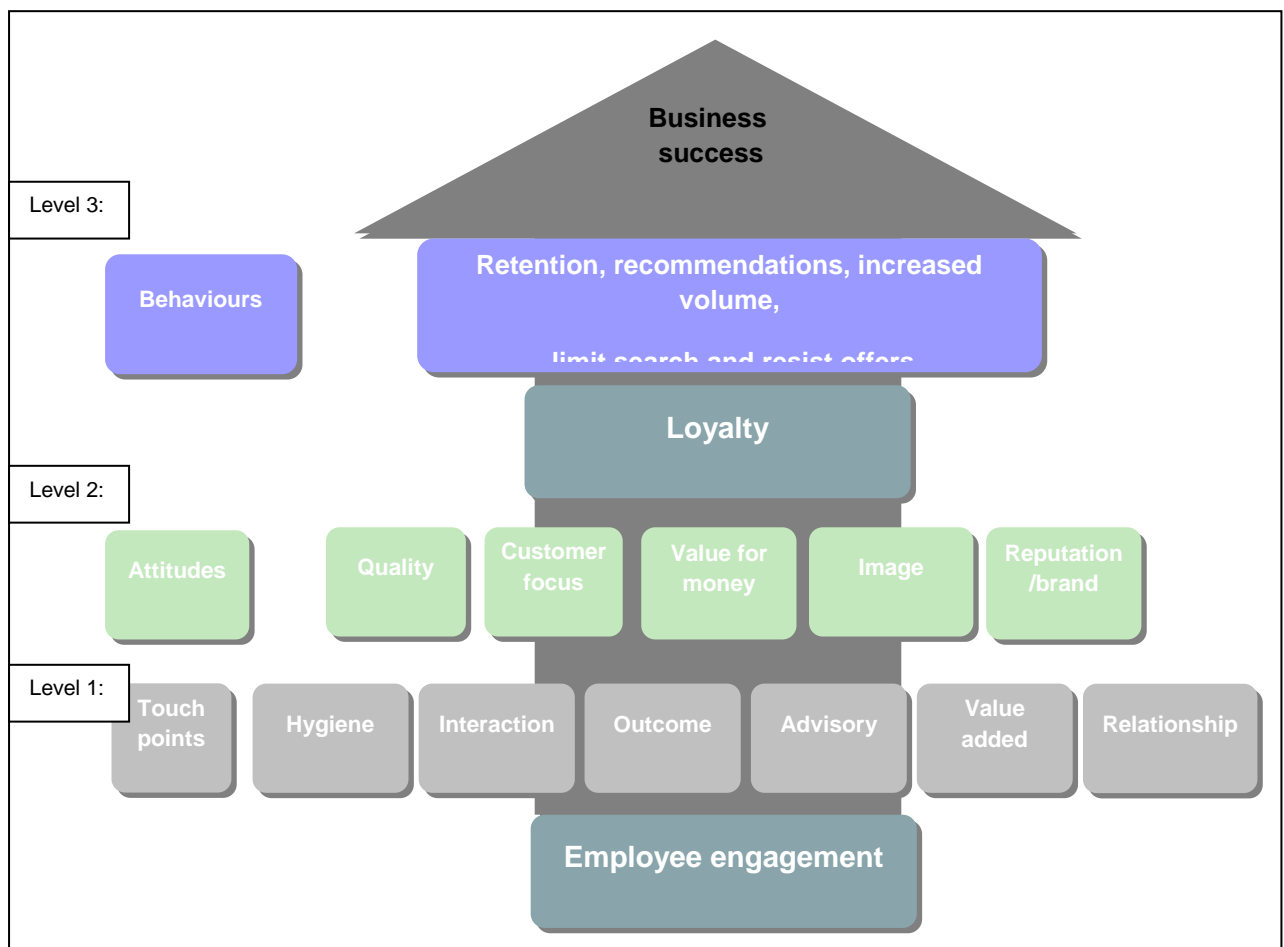
exacted and nobody will admit to mistakes in order to protect him or herself. People will tend to blame others for whatever goes wrong (Koortzen & Cilliers, 2002). Ultimately, customer experience will be impacted (Schutte, 2003). Customer experience will be impacted.

If a system is neutral the system will be indifferent or apathetic – either does not care anymore, could not care less or has tried too often without any reaction to implement change. Voices are not brought to the organisational table and people do just enough in order to survive. The customer will experience an indifferent service offering.

Pre-requisites of customer experience

The researchers developed a framework to determine the pre-requisites of a total customer experience, namely the Integrated Services Measurement (ISM) framework presented in figure 3 below.

Figure 3: Integrated Services Measurement Framework oyalty



Source: Adapted from Markinor (2004). Copyright: Walker Information.

The ISM framework as depicted in figure 3 indicates measurement of the customer experience on three levels, namely a touch point level, an attitudinal level and a behavioural level. To align customer experience being defined, as more than customer service, but including service, the basic service needs of customers were included in the framework. Customer experience is also defined as including the emotions and behaviour of customers and therefore the framework includes a measurement on an attitudinal and on a behavioural level as well as loyalty of customers towards an organisation.

Level 1: Service needs. This level describes the interaction between the customer and the organisation (i.e. the touch point). It represents the entire customer experience during interaction, fulfilling all service needs as described in the elements of the total customer experience. In customer-measurement terms, the touch point may be summarised in terms of attributes to provide the most comprehensive definition of the interaction (e.g. look and feel, timeliness, outcome [accuracy and speed], professionalism, communication [understanding, language, clarity during interaction]).

Level 2: Attitudes as emotional and intellectual dispositions caused by customer experience during interaction to meet service needs. These are the “feelings” customers have that will in turn affect their behaviour towards the service provider. Elements of the attitudinal level are quality of the organisation, customer focus, reputation and brand.

Level 3: Behaviours. These are intended actions that will make money for the service provider. Behaviours are initiated in response to and caused by customer attitudes.

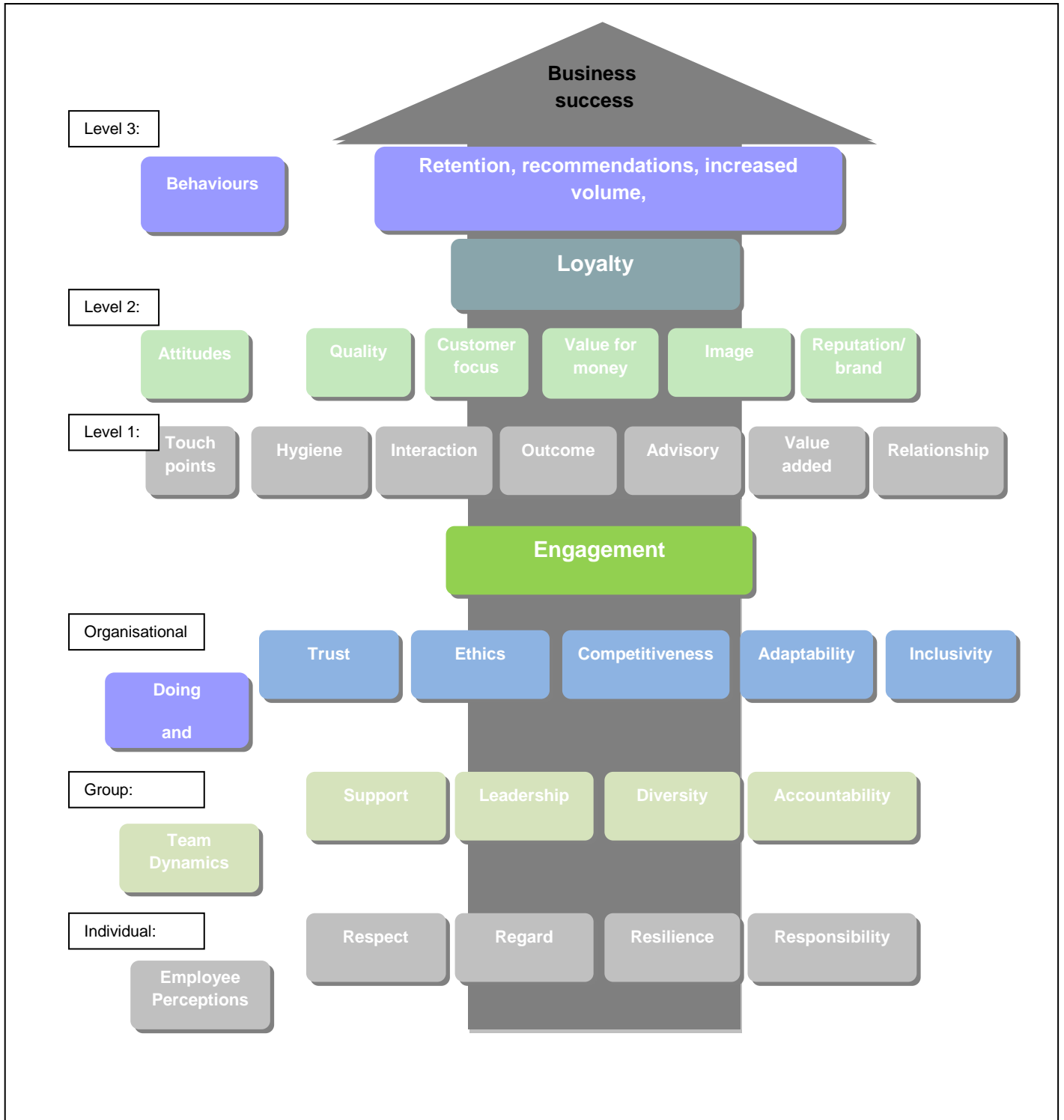
RESULTS / FINDINGS

Through grounded theory methodology the pre-requisites of employee engagement crystallised (see figure 2). The pre-requisites for a changed customer experienced are described in figure 3. Viljoen (2009) argues that employee engagement will result in a positive customer experience. Drotskie (2009) argues that a positive customer experience is reliant on employee engagement.

The researchers of this paper argue that focusing on external factors in the world of the customer cannot change customer experience. To influence the customer experience, the employee engagement within the organisation should be optimized. Jung (1959) stated years ago that what happen inside, would manifest outside. The researchers agree with this philosophy and argue that an integrated approach towards optimising customer experiences should be followed.

The causality between employee engagement and customer experience are displayed in figure 4, where a synthesis of the two frameworks discussed earlier is presented.

Figure 4: Integrated Systemic Framework of Customer Experience Respect



Source: Adapted from Viljoen (2009) and Markinor (2004)

The Integrated Systemic Customer Experience Framework in figure 4 above indicate that through rewiring the perceptions of the individual, the group and the team through a process of inclusivity, around the Doing and the Being – thus, the Strategy which includes customer experience factors and the values of the organisation – virtuous energy is released in the system that will impact on customer experience. Through optimising the customer experience at the touch points, the customer attitudes and behaviours can manifest in organisational benefits and ultimately in organisational success and sustainability.

CONCLUSION

Culture, climate and customer experience should be studied simultaneously and systemically in order to gain a better understanding of causalities between these dynamics.

An understanding of the external environment (in this case the world of the customer) may assist in creating insights, reawakening instincts and cultivating organisational change.

To summarise leadership in the global community should acquire the skill to translate strategy, which include customer experience focuses (the Doing) and the values of the organisation (the being) through a process of inclusivity.

Optimising employee engagement can optimise customer experience. The enhanced customer experience will directly impact on business success.

IMPLICATIONS FOR MANAGERS / RECOMMENDATIONS

Organisations need to create a space in which the wisdom, insights and gifts – the skills for which the individual was employed in the first place – are brought to the organisational table in order to create an environment in which diverse views, paradigms and perspectives may create a synergistic, sustainable outcome. Through a process of inclusivity, a climate or behavioural framework is created by leadership (Viljoen, 2009). The benefits of engagement may then be unleashed. The task of leadership is to make sense of the nonsense, to make music out of the noise, and to facilitate growth in individuals, in groups and, ultimately, in organisations by enhancing the wisdom and unleashing the potential contained in the workforce.

Customers will experience this energy through behaviour of the employees when interacting with an organisation. Ultimately, it will lead to a real emotional, mutually satisfying, experience for both the employee and the customer.

If management can get insight into the causality between employee engagement and customer experience, their effort to optimise both the internal and the external world can be simplified.

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RETAINING CUSTOMERS IN THE SOUTH AFRICAN LONG-TERM INSURANCE INDUSTRY – A CASE STUDY PERSPECTIVE

Purpose: The primary objective of this study is to investigate the influence of selected independent variables, two-way communication and conflict handling on intentional customer loyalty via CRM as the intervening variable at a South African long-term insurance organisation.

Design/methodology/approach: Primary data was gathered using a questionnaire, with items referring to CRM, customer loyalty, two-way communication and conflict handling. The sample consisted of 254 customers in four major centres in South Africa. Data were factor-analysed.

Findings: One independent variable, conflict handling, exerted a statistically significant positive influence on the intervening variable (CRM), while two-way communication exerted a statistically significant negative influence on the intervening variable (CRM). The intervening variable (CRM), positively influenced the dependent variable (Customer Loyalty).

Implications: If long-term insurance organisations communicate timely and accurately, and are skilled in conflict handling, greater loyalty will be created among customers.

INTRODUCTION

Over the past twenty years, the importance of the service industries to the world economy has grown tremendously. In 2003 the service sector contributed to over 80% of the employment and Gross Domestic Product (GDP) of the United States (Zeithaml, Bitner and Gremler, 2006:8). In the South African economy the service sector contributed 71.4% of South Africa's total GDP in 2006 (Datamonitor, 2008:45). The services sector is spearheaded by the financial services sector. The services sector employs 65% of the total workforce in South Africa (Datamonitor, 2008:55). Since democracy in 1994, there has been increasing competition in the South African financial services industries from niche players and foreign entrants, as technology and financial liberalisation created the stimulus for competition from new areas.

A business that wants to succeed in today's global competitive market, where customers are empowered and brand loyalty erosion is increasing, will have to move to customer relationship management (CRM). Customer relationship management enables organisations to provide excellent real-time customer service through the effective use of individual

account information (Kotler and Keller, 2006:152). This requires a more complex approach, organisations need to investigate customer needs, they have to build relationships with both existing and potential customers, and they will have to satisfy their customers' needs (Rootman, 2006:2). Long-term insurance organisations will therefore require a loyal customer base to secure their sustainability. Loyal customers can be generated through CRM. CRM can assist long-term insurance organisations in building long-term beneficial relationships with customers which has a direct influence on the value proposition to customers, and the competitive position of the organisation in the market. This will lead to customer loyalty and increased profits for the organisation.

Relationship Marketing and its application, CRM, focus on the long-term profitability of keeping customers for life (Sauers, 2008:xxi). This requires two-way dialogue between the organisation and the customer to develop a relationship (Du Plessis, Jooste and Strydom, 2005:73). The literature stipulates that two-way communication and conflict handling form important parts of CRM. Communication is very important, especially in the early stages of the relationship with the customers, as an organisation wants to build awareness and convince interested customers to make a purchase. Communication is the ability to provide timely and trustworthy information (Ndubisi, 2007:100). An organisation would not be able to function without two-way communication, as its management would not be able to convey important information to employees, downward communication, and vice versa, upward communication, or to customers (Rootman, 2006:12). If an organisation succeeds in avoiding or resolving conflicts with customers before they become problems, this will have a positive influence on customer loyalty (Ndubisi and Wah, 2005:553). This will lead to commitment which can be defined as the willingness to work and stay in the relationship indefinitely (Sauers, 2008:35).

This paper includes a literature review of CRM and customer loyalty, and an explanation of the problem that was investigated. The research objectives, hypotheses and methodology are then discussed. Thereafter the empirical results are discussed followed by management implications and recommendations.

LITERATURE REVIEW

The literature review presented in this paper aims at providing a broader understanding of the major constructs examined in the research. Specifically, a brief discussion of the South African long-term insurance industry is provided. The literature review will also focus on CRM, two-way communication, conflict handling and customer loyalty.

The long-term insurance industry in South Africa

The South African insurance market generated total gross written premiums of \$24.2 billion in 2007, representing a compound annual growth rate (CAGR) of 8.9% for the period spanning 2003-2007. The long-term insurance segment was the market's most lucrative in 2007, generating gross written premiums of \$14.7 billion, equivalent to 60.6% of the market's overall value. The performance of the market is forecast to accelerate, with an anticipated CAGR of 9.7% for the five-year period 2007-2012, which is expected to drive the market to a value of \$38.5 billion by the end of 2012 (Datamonitor, 2008:7). Liberty Life is the largest long-term insurance organisation in South Africa, accounting for 20.3% of the country's value. Table 1 depicts the main long-term insurance companies in South Africa by market share.

Table 1: South African long-term insurance market share, % share by value in 2007

ORGANISATION	% share
Liberty Life	20.30
Old Mutual	18.30
Sanlam Limited	14
Momentum Group	12.60
Other	34.80
Total	100

Source: Adapted from Datamonitor (2008:11)

Customer Relationship Marketing

Today, many organisations such as banks and long-term insurance organisations realise the importance of CRM and its potential to help them acquire new customers, retain existing ones and maximise their lifetime value. A close relationship with customers will require a strong coordination between Information Technology (IT) and marketing departments to provide a long-term retention of selected customers (Onut, Erdem and Hosver, n.d.:1). The broad application of CRM has led to a multitude of definitions. Berndt, Du Plessis, Klopper, Lubbe and Roberts-Lombard, (2009:237-238) defined CRM as "an enterprise-wide commitment to identify the individual customers of an organisation, and to create a relationship between the organisation and these customers as long as the relationship is mutually beneficial. CRM evolved from organisation processes such as RM and the increased emphasis on improved customer retention through the effective management of customer relationships."

The purpose of CRM is to develop appropriate relationships with customers through communication and conflict handling, to create long-term profit (Ndubisi, 2007:98; Grönroos, 2003:31). CRM provides a transition from a transaction-based to a relationship-based model that concentrates on the acquisition, development and retention of profitable customer relationships. Two-way communication with customers is enabled by advances in information and telecommunications systems. All the communication with customers, when it is integrated into the organisation, recorded and managed, allows the relationships with customers to develop and to be maintained (Baran, Galka and Strunk, 2008:6-7). A goal of CRM is to create an opportunity for re-purchase by a customer through an improvement in the communication process to the customer, providing the right offer, relating to product and price, through the right channel, at the right time. This will lead the customer to perceive that the organisation is concerned with the customer's needs, and this in turn may lead to greater satisfaction, towards the organisation. When the customer has additional experiences with the organisation in which the customer's needs were satisfied, the customer may develop a sense of loyalty to the organisation (Egan, 2004:20). How conflict is handled between the organisation and the customer will either ensure loyalty, or the customer will leave the company and go to a competitor (Ndubisi & Wah, 2005:545). Long-term relationships with customers can successfully be created, reinforced and retained by communicating with the customers in a timely, reliable and pro-active fashion and handling conflicts between the organisation and the customers effectively (Ndubisi, 2007:98).

Two important components of CRM

The only real sustainable business growth strategy is through a mutualistic symbiotic relationship with customers, which allows the business to understand the customers' needs more clearly and to create and deliver superior value. Organisations must fulfil their promises to customers as this will lead to customer satisfaction, customer retention and long-term profitability for the organisation. Scholars have listed two important virtues that have been theorised in the customer relationship marketing literature as, two-way communication and conflict handling (Du Plessis et al., 2005:73-76; Ndubisi and Wah, 2005:544; Buttle, 2004:15).

Two-way communication

Today there is a new view of communication as an interactive dialogue between the company and its customers which takes place during the pre-selling, selling, consuming and post-consuming stages. Communication in a relationship means providing information that can be trusted, providing information when problems occur and fulfilling promises (Ndubisi and Wah, 2005:545). For a customer to perceive a relationship as valuable, the customer's

needs must be fulfilled. The needs of the customers can be established through gathering information from them. This can take place during face-to-face interviews with customers, focus groups and observing the services customers purchase (Du Plessis et al., 2005:82). Employees are at the front line of service and they know more than anyone else in the organisation what customers want. Having open communication channels between employees and management (upward communication) can prevent service problems before they occur and minimise them when they arise (Zeithaml et al., 2006:507).

Conflict handling

Conflict handling can be described as the supplier's ability to avoid potential conflicts, solve manifested conflicts before they create problems, and the ability to discuss solutions openly with customers when problems do arise (Ndubisi and Wah, 2005:550). Only approximately 5% of all dissatisfied customers complain, and only 50% of them report a satisfactory problem resolution. The need and ability to resolve customer problems in a satisfactory manner is critical. On average, satisfied customers tell three people of their good experience, while dissatisfied customers will tell eleven people. Customers whose complaints are satisfactorily resolved often become more company loyal than customers who were never dissatisfied. About 34% of customers who register a major complaint will buy from a company again if their complaint is resolved, and the number rises to 52% for minor complaints. If the complaint is resolved quickly, between 52%, for major complaints, and 95%, for minor complaints, of customers will buy from the company again. Organisations that encourage disappointed customers to complain and empower employees to remedy the situation on the spot, have been shown to achieve higher revenues and greater profits (Kotler and Keller, 2006:419-420).

Customer loyalty

The aim of relationship marketing is the establishment and maintenance of long-term relationships with customers (Zeithaml et al., 2006:182). Organisations understand that it is considerably more profitable to keep and satisfy existing customers, than to renew a strongly-churning customer base constantly. To make relationship marketing work, marketers have adopted a customer management orientation, which emphasises the importance of customer lifetime value, retention and the dynamic nature of a person's customer-firm relationship over time (Reinartz and Kumar, 2003:77). The rationale behind CRM is that it improves business performance by enhancing customer satisfaction and driving up customer loyalty. A model has been designed to explain this logic, and it is called the satisfaction-profit chain (Buttle, 2004:20). Customer satisfaction increases because the insight into customers allows organisations to understand them better, and through this

organisations create improved customer value propositions. As customer satisfaction rises, so does customer repurchase intention. This then influences the actual purchasing behaviour, which significantly impacts business performance (Buttle, 2004:20-21).

There are two major approaches when defining and measuring loyalty; one is based on behaviour and the other on attitude. The behavioural loyalty refers to a customer's behaviour on repeat purchase, indicating a preference for a brand or a service over time. There are two behavioural dimensions to loyalty. Firstly, the question must be asked if the customer is still active. Secondly, the organisation must determine if they maintained their share of the customers spending. Attitudinal loyalty refers to a customer's intention to repurchase and recommend, which are good indicators of a loyal customer. A customer who has the intention to repurchase and recommend is very likely to remain with the organisation (Buttle, 2004:21-22; Kandampully and Suhartanto, 2003:346-347). Attitudinal (intentional) loyalty is measured by reference to components of attitude such as beliefs, feelings and purchasing intention. Customers who have a strong preference for involvement or commitment to a supplier are the more loyal in attitudinal terms (Buttle, 2004:22). This study will focus on the attitudinal (intentional) loyalty of the customers of long-term insurance organisations. Organisations must track customer loyalty as the truer measure of how they compare to competitors, this will shift the focus from customer acquisition to customer retention (Baran et al., 2008:327).

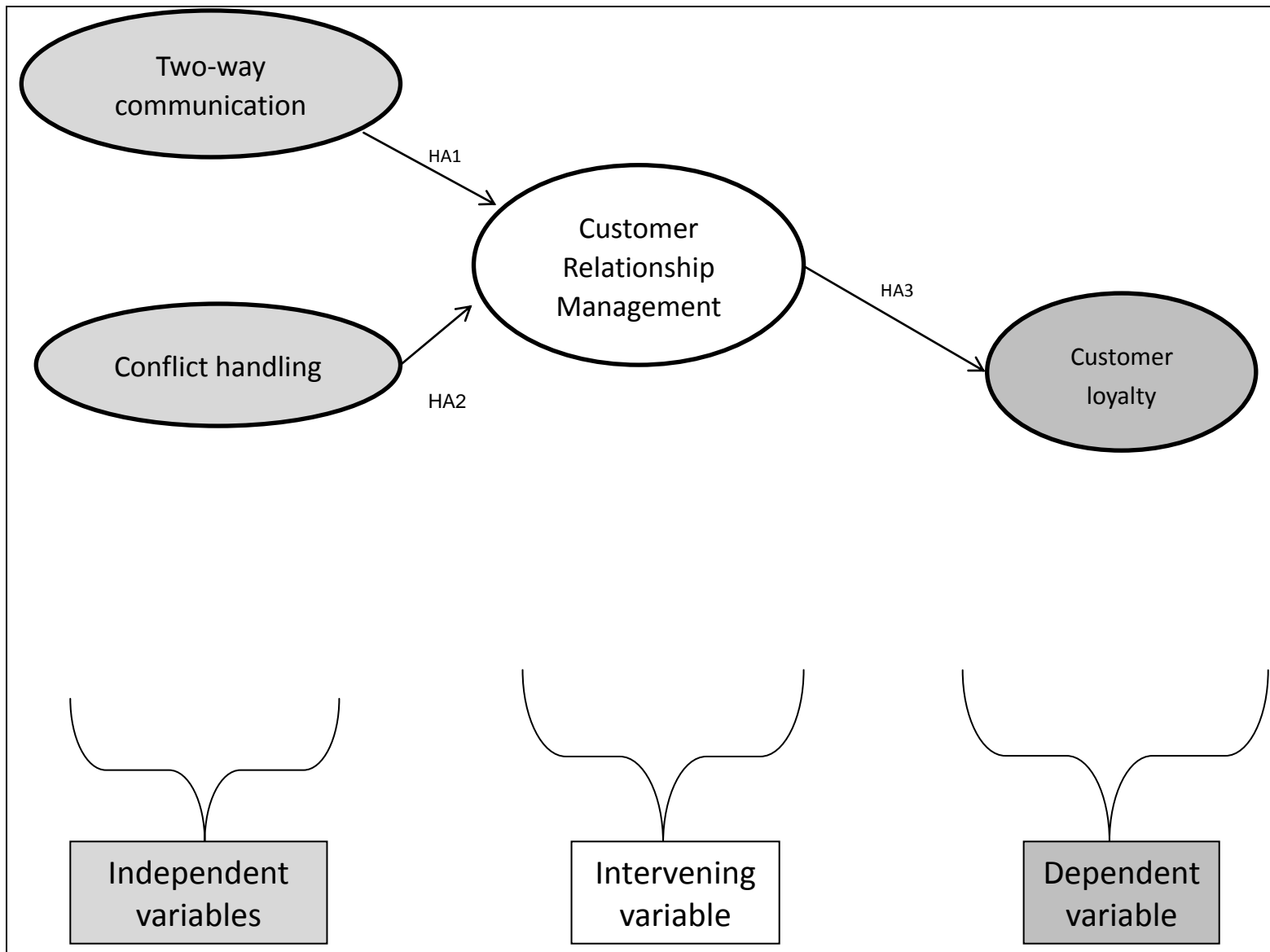
PROBLEM INVESTIGATED

Statistics released by the Life Offices Association (2007), indicated that in the second half of 2006 surrenders of policies increased, lapsed premiums also increased by 18% as compared to the previous half-year, and 31% compared to the corresponding period in 2005. A policy is surrendered when the policyholder stops paying the premiums and withdraws the reduced fund value of the policy before maturity. A lapse occurs when the policyholder stops paying premiums before the fund value exceeds the unrecovered costs, meaning that the paid-up or surrender value is zero. In both cases, customers are lost as they terminate their relationship with the long-term insurance organisation. The purpose of CRM is to increase customer satisfaction, improve customer perception of service quality and increase customer loyalty (Baran et al., 2008:397). CRM applied correctly leads to customer loyalty, and loyal customers are usually more profitable (Grönroos, 2003:7).

To retain existing customers in the current economic climate where customers are lapsing their long-term insurance policies because of the unsure economic future, long-term insurance organisations will have to understand how two-way communication and conflict

handling through the application of CRM can contribute to customer loyalty. Larger portions of long-term customers than short-term customers exhibit high profitability, therefore the theory of an overall positive connection between customer loyalty and profitability cannot be rejected (Leverin and Liljander, 2006:235). Long-term insurance organisations will not be able to survive for much longer in the competitive long-term insurance industry, battling the global recession, if they do not understand the importance of these two variables influencing their CRM and how they can improve customer loyalty. The paper will focus on the importance for long-term insurance organisations, to better understand the need for CRM and how that will lead to customer loyalty. The problem statement therefore refers to an investigation of the influence of the variables two-way communication and conflict handling on customer loyalty through the intervening role of customer relationship management at a long-term insurance organisation in South Africa.

Figure 1: Conceptual framework



Source: Developed for this research

Figure 1 illustrate that the independent variables of the research constitute selected variables as identified in literature on CRM. These variables are two-way communication and conflict handling. In this paper each variable's influence was assessed through an empirical investigation. The paper will further attempt to identify the degree of influence of CRM on the customer loyalty of a long-term insurance organisation in South Africa, the dependent variable. The dependent variable, customer loyalty, refers to the impact of the underpinnings of CRM on customer loyalty.

Service firms can benefit from CRM, as customers focus on the service aspect and interaction with the service provider when evaluating a service firm, as no physical product is

involved (Rootman, 2006:10). Long-term insurance organisations need to be aware of the variables that influence its CRM activities. This would assist long-term insurance organisations in adapting the required variables to ensure the improved application of the CRM process to strengthen customer loyalty and increase market share in South Africa.

RESEARCH OBJECTIVES

The primary objective of this paper is to investigate the influence of the independent variables, two-way communication and conflict handling on intentional customer loyalty via CRM as the intervening variable at a long-term insurance organisation in South Africa.

The following secondary objectives were identified:

- To investigate whether two-way communication influences CRM at a long-term insurance organisation in South Africa.
- To investigate the influence of conflict handling on CRM at a long-term insurance organisation in South Africa.
- To investigate the intervening role of CRM on the effect of two-way communication on customer loyalty at a long-term insurance organisation in South Africa.
- To investigate the intervening role of CRM on the effect of conflict handling on customer loyalty at a long-term insurance organisation in South Africa.

RESEARCH HYPOTHESES

To give effect to the problem statement, a number of null hypotheses were formulated, stating that no relationships exist. Alternative hypotheses were also formulated stating that the relationships exist.

Relationship between the independent variables and the intervening variable, CRM

HO¹: There is no relationship between the perceived two-way communication of the long-term insurance organisation and CRM at the long-term insurance organisation in South Africa.

HA¹: There is a relationship between the perceived two-way communication of the long-term insurance organisation and CRM at the long-term insurance organisation in South Africa.

HO²: There is no relationship between the perceived conflict handling by the long-term insurance organisation and CRM at the long-term insurance organisation in South Africa.

HA²: There is a relationship between the perceived conflict handling by the long-term insurance organisation and CRM at the long-term insurance organisation in South Africa.

Relationship between the intervening variable, CRM, and the dependent variable, customer loyalty

HO³: There is no relationship between CRM and intentional customer loyalty at the long-term insurance organisation in South Africa.

HA³: There is a relationship between CRM and intentional customer loyalty at the long-term insurance organisation in South Africa.

RESEARCH METHODOLOGY

This study was conducted in two phases, the first phase focused on qualitative research, and the second phase focused on a quantitative research approach. A focus group interview was held with a manager of the Customer Walk-in-Centre in Johannesburg, and two other senior managers responsible for customer relationships at a long-term insurance organisation. The focus group interview assisted the researcher in developing the questionnaire and provided the desired information on CRM and customer loyalty from a long-term insurer's viewpoint (Rootman, 2006:22). The questionnaire was used during the quantitative phase of the research. The reason for quantitative data is that it is easy to interpret the results in simple conclusions (Zikmund & Babin, 2007:83). Taking into consideration the nature of the research, the problem statement and all other related matters regarding the research, the research was descriptive.

A structured questionnaire survey was used to collect data for this research, and this process was administered by conducting personal interviews. The questionnaire included self developed items, as well as items from questionnaires used in previous research. The population of the research consists of the long-term insurer's entire individual, natural person, customers who visited Customer Walk-in-Centres in Johannesburg, Pretoria, Durban and Cape Town. For the purpose of this study a probability sampling method was used. Stratified sampling, followed by simple random sampling was used in this study. The reason for selecting this sampling technique was that the sampling frame of the study was divided into subgroups, strata, and the sampling process was performed separately on each stratum. Stratified samples are the most statistically efficient and they allow the investigation of the characteristics of the interest for particular subgroups within the population (Churchill and Iacobucci, 2005:354). The sample size of this study was twofold. Firstly, the sample was based on the percentage of customers visiting Customer Walk-in-Centres presented as a portion of the total number of customers visiting these centres. Secondly, the percentage was applied to 254 customers of the long-term insurer entering the Customer Walk-in-Centres in Johannesburg, Pretoria, Cape Town and Durban.

Table 2: Determining the sample

Stratum	Number of Customer Walk-in-Centres	Customers normally serviced by centre expressed as a percentage of total customer serviced by centres on a daily basis	Total number of selected customers
Johannesburg	1	34.3%	87
Pretoria	1	30.3%	77
Cape-Town	1	10.2%	26
Durban	1	25.2%	64
Total	4	100%	254

Source: Developed for study.

The research instrument, a questionnaire, was pre-tested in a pilot study involving five customers in the Customer Walk-in-Centre in Johannesburg. Reliability and validity are the hallmarks of good measurement and the keys to assessing the trustworthiness of any research conducted. The reliability measurement for this study was the internal consistency reliability test. Reliability tests whether the questionnaire will measure the same thing more than once and result in the same outcome every time (Rootman, 2006:124; Cant, Gerber-Nel, Nel, and Kotze, 2005:235; Ndubisi and Wah, 2005:551; Zikmund, 2003:301). The extent to which a particular measure is free from both systematic and random error indicates the validity of the measure. In this study exploratory factor analysis, utilising the Varimax with Kaiser Normalisation was performed to assess the discriminant validity of the questionnaire. Validity was also confirmed by conducting the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity (Madiba, 2009:121; Norusis, 2003:399-401).

Data analysis refers to the transformation of raw data into a form that makes it easy to understand and interpret. Describing responses or observations is typically the first form of analysis (Naidoo, 2008:81; Roberts-Lombard, 2006:52; Cant et al., 2005:204; Zikmund, 2003:473). Computers were used for the analysing of data. STATKON of the University of Johannesburg was used to analyse the data so that the data could be interpreted into meaningful information or findings that were explored further to propose recommendations to the research.

FINDINGS

The findings of the empirical investigation are presented in the following section. Firstly, this paper will look at reliability, then validity and lastly the findings of the multiple regression analyses will be discussed.

Reliability

The internal consistency reliability test compares different samples of the items being used to measure a phenomenon, during the same time period. This can be done by means of a split-half reliability test, also known as the coefficient alpha or Cronbach's alpha, and results exceeding 0.60 will reflect the lower level of acceptability (Ndubisi and Wah, 2005:551). The reliability statistics for the questionnaire are presented in Table 3.

Table 3: Reliability statistics

Constructs	Cronbach's Alpha
Two-way communication	0.906
Conflict handling	0.882
CRM	0.941
Loyalty	0.970
CRM an it influences on Loyalty	0.918

It is evident in Table 3 that Cronbach's alpha for all five constructs are above the lower limit of acceptability, 0.60. This confirms that the measurement set used in the study was reliable.

Validity

A factor analysis can also be performed to assess the discriminant validity of the measuring instrument (Rootman, 2006:128). As stated earlier, the rotation method used in this research was the Varimax with Kaiser Normalisation. Table 4 reflects the rotated factor analysis results of the variables two-way communication and conflict handling.

Table 4: Exploratory rotated factor analysis results

No	Items	1 CONF	2 TWCOM
A4.6	My relationship with the long-term insurance organisation depends on whether it compensates me for mistakes made	.729	.082
A4.7	My relationship with the long-term insurance organisation will be better if it apologises for problems	.715	.260

	that arose		
A4.4	My relationship with the long-term insurance organisation will be better if it identifies problems even before they occur and corrects them	.695	.302
A4.5	If the long-term insurance organisation keeps me informed on how they are resolving problems that occurred, I feel more positive towards it	.662	.125
A3.4	My relationship with the long-term insurance organisation depends on whether the information it provides is always accurate	.297	.698
A3.5	My relationship with the long-term insurance organisation can improve if the communication that I receive from it is easy to understand	.250	.679
A3.7	My relationship with the long-term insurance organisation depends on whether it makes and fulfils promises	.246	.656
A3.6	My relationship with the long-term insurance organisation depends on whether it tailor makes their communication to suit my needs	.236	.609

Multiple regression analyses results

Influence of the independent variables on the intervening variable

Multiple regression analysis was performed to assess the relationship between the independent variables (Two-way Communication and Conflict handling) and the intervening variable (CRM). The results are reflected in Table 5.

Table 5: Influence of the independent variables on CRM

Dependent variable CRM					
Model	Sum of Squares	DF	Mean Square	F	Sig.
Regression	320.380	4	80.095	79.266	0.000
Residual	251.604	249	1.010		
Total	571.984	253			
	R²				
	0.560				
Model	Standardised	T	Sig.		

	coefficients, Beta				
(Constant)		- 2.121	0.035		
Two-way communication	-0.190	- 2.478	0.014		
Conflict handling	0.517	8.563	0.000		

Table 5 indicates that one of the independent variables, Conflict handling, exerted a statistically significant positive influence on the intervening variable (CRM), while Two-way Communication exerted a statistically significant negative influence on the intervening variable (CRM). The researcher relied on a 95% level of confidence, therefore a p-value of less than or equal to 0.05 implied that analysis of the t statistic and significance level indicates that it is highly unlikely that the results are due to chance alone $t=-2.478, p=0.014$ and $t=8.563, p=0.000$. This implied that the null hypotheses are rejected and the alternative hypotheses are accepted. The relationship between Two-way communication and CRM is significant at $p = 0.014$ and the relationship between Conflict handling and CRM is significant at $p = 0.000$.

The following hypotheses; H_0^1 , which states that there is no relationship between the perceived two-way communication of the long-term insurance organisation and CRM at the long-term insurance organisation in South Africa; and H_0^2 , which states that there is no relationship between the perceived conflict handling by the long-term insurance organisation and CRM at the long-term insurance organisation in South Africa are therefore rejected.

The following alternative hypotheses; H_A^1 , which states that there is a relationship between the perceived two-way communication of the long-term insurance organisation and CRM at the long-term insurance organisation in South Africa; and H_A^2 , which states that there is a relationship between the perceived conflict handling by the long-term insurance organisation and CRM at the long-term insurance organisation in South Africa are therefore accepted.

Influence of the intervening variable on the dependent variable

Multiple regression analysis was performed to assess the relationship between the intervening variable (CRM) and the dependent variable (Customer Loyalty). The results are reflected in Table 6.

Table 6: Influence of the intervening variable on Customer Loyalty

Dependent variable Customer Loyalty					
Model	Sum of Squares	DF	Mean Square	F	Sig.
Regression	503.073	1	503.073	1019.925	0.000
Residual	124.298	252	0.493		
Total	627.371	253			
	R ²				
	0.802				
Model	Standardised coefficients, Beta	T	Sig.		
(Constant)		1.691	0.092		
CRM	0.895	31.936	0.000		

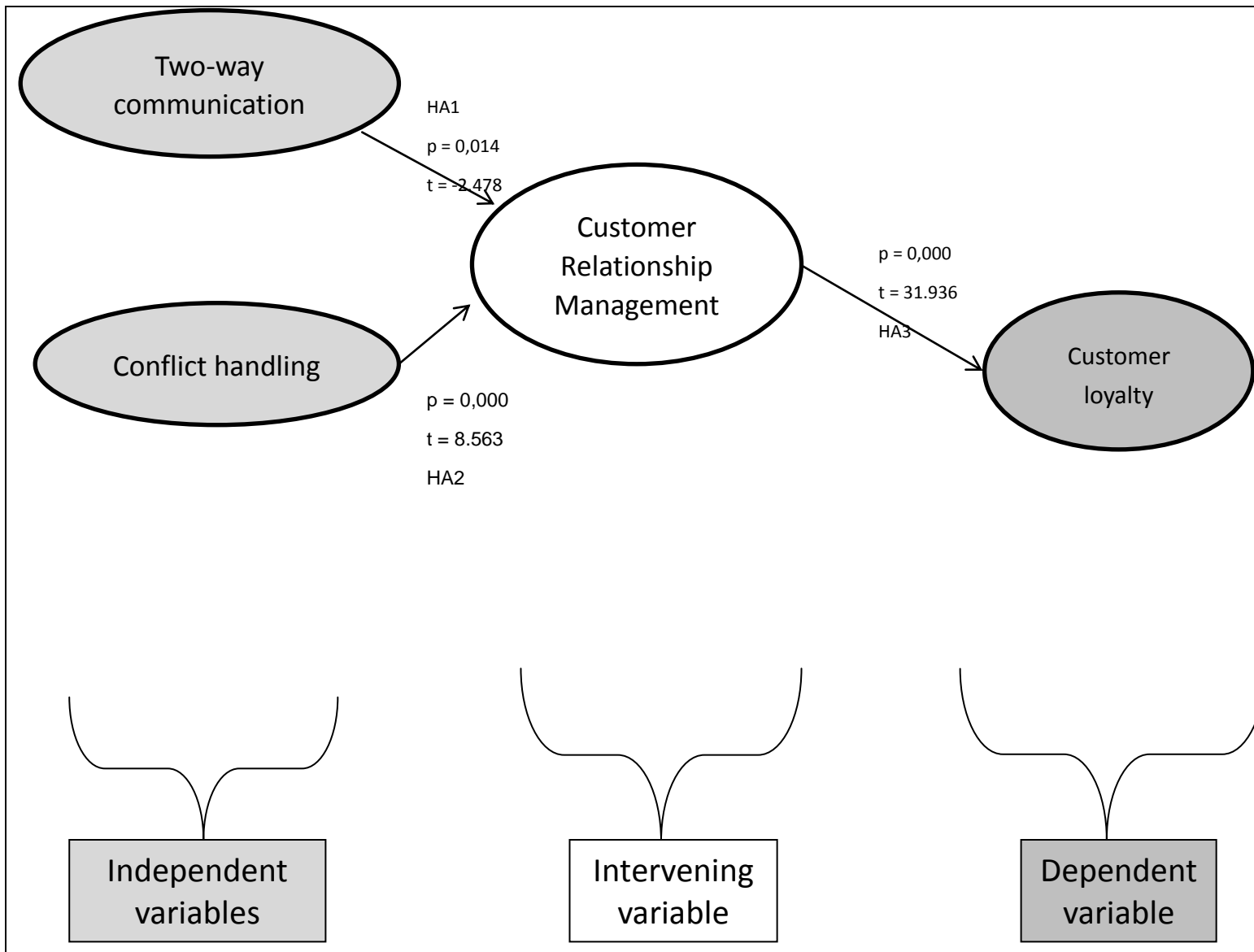
Table 6 indicates that the intervening variable (CRM) positively influenced the dependent variable (Customer Loyalty). The relationship between CRM and Customer Loyalty is significant at $p = 0.000$.

This relationship implied that if the long-term insurance organisation successfully maintained relationships with its customers, intentional Customer Loyalty at the long-term insurance organisation will increase. Table 6 indicates that the intervening variable in the multiple regression analysis explained 80.2% of the variance (R^2) in the dependent variable. In other words, it can be said that 80.2% of a possible change in the level of Customer Loyalty in the long-term insurance organisation is caused by CRM. Table 6 further indicates that one unit increase in CRM will increase Customer Loyalty with 89.5% when considering Beta.

The hypothesis H_0^3 , which states that there is no relationship between CRM and intentional customer loyalty at the long-term insurance organisation in South Africa is rejected. The hypothesis H_A^3 , which states that there is a relationship between CRM and intentional customer loyalty at the long-term insurance organisation in South Africa is accepted.

The results of the findings of the empirical investigation are presented in Figure 2.

Figure 2: Empirical model modified



Source: Developed for this research

MANAGEMENT IMPLICATIONS AND RECOMMENDATIONS

The empirical results imply that a long-term insurance organisation can improve and maintain its relationships between the organisation and customers if the long-term insurance organisation communicate information to customer efficiently and accurately, thereby also listening to their customers and handling potential and manifested conflicts skilfully. Furthermore it is clear that if conflict handling skills exhibited by the long-term insurance organisation are apparent customer require less two-way communication to improve the relationship quality.

Two-way communication

The focus of a long-term insurance organisation should be on attracting and retaining customers through co-operation, trust, commitment and the sharing of information between the parties in the relationship. In the ongoing relationship with the customer, a long-term insurance organisation is required to communicate with the customer, and the customer is expected to listen. Both parties in a relationship have to communicate with each other. A long-term insurance organisation can nurture the loyalty of customers by providing accurate information that is easy to understand and that is tailored to address the customers' needs, and finally by making and fulfilling promises. A long-term insurance organisation should ensure that its sales force discloses all necessary information to the customer in a clear, understandable and accurate way at the point of sale. Once the policy is in force, communicating to the customer in a timely, accurate and understandable way, and ensuring customers are promptly informed about key changes to their policies and its likely returns should be a priority for a long-term insurance organisation. This can be done through the annual anniversary letter being sent to all customers. A long-term insurance organisation should regularly measure their two-way communication through the customers' eyes and not use the long-term insurance organisation's yardstick. A long-term insurance organisation can design specific training sessions. The training sessions can be made compulsory to attend for new employees and can be provided annually to all employees, to enforce the importance of the two-way communication aspect. It is important to emphasise the long-term insurance organisation's focus on the two-way communication aspect to new employees and to repeat it regularly to all employees. A long-term insurance organisation must ensure that once the conflict handling aspect has firmly been imbedded, it reduces its two-way communication with customers to a customer desired level.

Conflict handling

Customers will be loyal to a long-term insurance organisation if it handles customer complaints and other conflicts satisfactorily. It is therefore important that effective conflict resolution mechanisms are not only in place, but are proactive, so as to pre-empt potential sources of conflict and address them before problems manifest. A long-term insurance organisation should also ensure the effectiveness of the Customer Relations Department to ensure that reactive solutions are marshalled decisively and in time to resolve problems and protect customers from avoidable losses. A long-term insurance organisation must be willing to discuss problems with customers openly. The way in which conflicts are handled by a long-term insurance organisation will influence customer loyalty directly. The degree to which a long-term insurance organisation and its customers in the relationship engages in

conflict handling processes will depend on their prior satisfaction with the relationship, the magnitude of the investment in the relationship and the alternatives that the parties have.

A long-term insurance organisation should make it as easy as possible for customers to complain. Written complaints should only be required if it is necessary for legal reasons. A long-term insurance organisation should inform customers of failures or mistakes, and if the long-term insurance organisation cannot correct them immediately, they should inform the customer when it will be rectified. A long-term insurance organisation should compensate customers immediately, and where immediate compensation cannot be given, no unnecessary delays should be allowed. A lost profitable customer has a greater effect on the long-term profitability of a long-term insurance organisation than over-compensation. The satisfied compensated customer will continue his relationship with the long-term insurance organisation and will most probably also contribute to favourable word-of-mouth communication. Emotional reactions from customers, such as anxiety and frustration as a result of the service failure or mistake, must also be managed, in addition to recovering the failure. A long-term insurance organisation must apologise, but it may not be enough in some situations. Customers must be compensated for losses suffered as a result of a mistake by a long-term insurance organisation. A long-term insurance organisation should regularly measure their conflict handling through the customers' eyes, and not use a long-term insurance organisation's yardstick. A long-term insurance organisation can design specific training sessions for employees emphasising the conflict handling aspect. Managers should only employ employees who can work with difficult customers.

Relationship between the intervening variable, CRM, and the dependent variable, customer loyalty

A long-term insurance organisation should develop training session to inform employees that the core CRM processes are customer acquisition, customer retention and customer development. Just as a customer acquisition strategy aims to increase the customer base, the focus of customer retention is to keep a high proportion of current customers by reducing customer defections. The long-term insurance organisation should launch a customer development strategy which aims to increase the value of retained customers. A long-term insurance organisation should retain and develop loyal customers by communicate timeously and accurately and must resolve conflicts in a manner that will eliminate unnecessary loss and inconvenience to customers.

In order to maintain relationships with customers and to retain loyal customers, a long-term insurance organisation can give special benefits to loyal customers, for example lowering

policy charges when new policies are entered into, and charging less administrative fees for managing investments. It is clear from the empirical studies that only one unit increase in CRM at the long-term insurance organisation can increase customer loyalty with 89.5%. A long-term insurance organisation should ensure that CRM and therefore customer loyalty increases by delivering high quality and high value products and services. The policies and other services should deliver on promises.

A long-term insurance organisation should train employees to understand that every single contact with a customer must count. Customers' first impressions are the ones they remember, therefore frontline employees should be equipped to ensure a positive first experience. This is the best way to acquire loyal customers. A long-term insurance organisation must know their customers. Loyalty schemes equivalent to Discovery's Vitality Programme can be introduced by a long-term insurance organisation. This loyalty programme will not only contribute to obtaining a bigger share of the wallet of the customer, but can also be used to obtain more information about customers. A long-term insurance organisation must build a system linked to its policy master that will inform management when customers defect. These customers should be contacted immediately and asked why they intend leaving the long-term insurance organisation, and determine if anything can be done to rectify the reason why the customer is not happy.

A long-term insurance organisation must deliver excellent customer services, the particular experience a customer has with customer service will influence how the customer feels about a long-term insurance organisation. A long-term insurance organisation should always do the unexpected and that is to treat customers well. Unfortunately most customers today expect to be ignored or mistreated. A long-term insurance organisation can request senior managers to phone clients personally to thank them for their business or give reasons for a mistake made, and indicate what the long-term insurance organisation is doing to rectify the mistake. A long-term insurance organisation should use its customer database to maximise the personalisation of offers to customers. Should a long-term insurance organisation be able to implement the recommendations, customer loyalty will increase which will lead to higher profits and will give a long-term insurance organisation a sustainable competitive advantage.

CONCLUSIONS

It is important to note that, although the research was conducted in four major centres in South Africa at one long-term insurance organisation, the findings and recommendations

may be applicable to other long-term insurance organisation in South Africa due to the uniformity of services on offer.

This research succeeded in identifying a list of dimensions that underpin CRM and which can predict customer loyalty at a long-term insurance organisation in South Africa. Managers aiming to build a loyal customer base should concentrate on the issue of, two-way communication and conflict handling. Strategies to improve, how the long-term organisation communicates with customers and how it obtains information concerning the customers' needs, and how conflicts between the customer and the organisation are dealt with during a service failure should be implemented. The strategies when implemented will increase customer loyalty which in turn will lead to increased profitability of the organisation and sustainability of the organisations future.

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THE INFLUENCE OF SELECTED DEMOGRAPHIC VARIABLES ON THE SUCCESS OF COPRENEURSHIPS

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ABSTRACT

Given the important role that copreneurial businesses play in national economies, the unique challenges that they face, and the lack of research attention given to such spousal teams, the objective of this paper is to contribute to the more effective functioning of copreneurships in South Africa by investigating the impact that selected demographic factors have on their success.

For the purpose of this study, a total of 1 548 respondents were identified using the convenience snowball sampling technique, and a structured questionnaire was made available to them. The data gathered from the 380 usable questionnaires was subjected to various statistical analyses.

The ANOVA, the Multiple Linear Regression analyses and the t-tests in this study show that the demographic variables *Leadership*, the *Tenure of the business*, the *Numbers of employees*, the *Location of the business*, *Involvement in the business* and the *Status of the copreneurship* all have a significant influence on the dependent variables in this study. It is

therefore important that existing and prospective copreneurs take their demographic make-up into consideration when going into business together.

The influence that various relational- and organisational-based factors may have on the success of copreneurships is recognised as an area for future research. In spite of its limitations, this study has made significant contributions to the body of family business research by providing an important first glance at the factors influencing South African copreneurships.

Keywords: Copreneurship; Spousal teams; Family business; Demographic variables

INTRODUCTION

Family businesses are rapidly becoming the dominant form of business enterprise in both developed and developing countries (Muske, Fitzgerald and Kim, 2002; Neubauer and Lank, 1998: 11). These businesses are amongst the largest contributors to employment and wealth in almost every country, including South Africa (Maas and Diederichs, 2007: 3; Neubauer and Lank, 1998: 11; Rwigema and Venter, 2004: 474). Family businesses represent substantial economic entities within the macro economy, while also providing significant resources to the micro-economy, namely the family, with the most important of these resources being the household income (Muske and Fitzgerald, 2006: 194). The social and economic impact that family businesses have is increasingly being recognised, and their numbers are expected to continue rising in the future (Nieman, 2006: 38; Rwigema and Venter, 2004: 475; Venter, 2003: 32-34). However, despite their increasing numbers and the importance of family businesses, many of these businesses fail. As family businesses are significant contributors to the social and economic welfare of any economy, their lack of longevity is reason for concern.

One type of family business that is increasingly visible is that of spouses venturing into business together. Barnett and Barnett (1988) referred to such spouses as “copreneurs” as a result of their sharing joint ownership, commitment and responsibility of a business. Apart from facing the same challenges as other family businesses, the decision to venture into business with a spouse can present many additional challenges for a couple’s relationship, their family and the business. Copreneurial couples are faced with the challenge of pursuing two simultaneous life goals, making contradictory demands on the couple which may cause conflict and be detrimental to both the business and the marital relationship (Tompson and Tompson, 2000: 2). On the other hand, the consequence of combining the personal and business relationships of copreneurs may be a more successful business, because it can be

swiftly established and engenders a greater commitment, and because two heads are always better than one (Marshack, 1998: 57).

Little attention has, however, been given to copreneurs in existing family business literature (Fitzgerald and Muske, 2002: 2; Tompson and Tompson, 2000). The studies that have been conducted on copreneurs have been based on small convenience samples and are mostly anecdotal in nature (Muske and Fitzgerald, 2006: 193). Several articles on copreneurs have also been published, but these have been based on single case studies and were not research-oriented (Marshack, 1993: 356). Given the unique challenges faced by copreneurial businesses and the lack of research attention given to such businesses, the question arises how these businesses can improve their chances of success. In order to increase the likelihood of family business survival and success, it is required that greater insights be gained into the factors influencing the success of copreneurships.

Numerous studies have been conducted concerning teams and the factors that influence team effectiveness (Hitt, Miller and Colella, 2006; Kozlowski and Ilgen, 2006). In addition, Farrington (2009) investigated the factors influencing the *Perceived success* of sibling teams. Considering the literature on effective teams and the factors identified in Farrington's study (2009), it is clear that successful teams have validated their proficiency with regard to two types of factors, namely *relationship-based* factors and *organisational-based* factors. *Relationship-based* factors concern the interaction of family members, whereas *organisational-based* factors influence the ability of copreneurs to complete the task at hand. However, in order to begin investigating the factors that influence copreneurial success, the focus of this paper is on the demographic factors influencing the *Perceived success* of copreneurships.

As this paper focuses on investigating the demographic factors that influence the ability of spouses to work together as a team in their family business, the concepts "copreneurship" and "spousal team" are used interchangeably. For the purpose of this study, a "copreneurship" refers to a husband-and-wife team (or life-partners) who share the ownership and/or management of a business, which includes sharing the responsibility for all the activities within that business. The husband and wife (or life-partners) must both be actively involved in the management and/or decision-making of the business, and must both have considerable influence over decision-making in the business.

PROBLEM STATEMENT AND RESEARCH OBJECTIVE

As a type of family business, the growing importance of copreneurial businesses and their importance to national economies is evident. These businesses, however, face a unique set of challenges because of the overlap between the marriage and the business relationship. Very little research attention has been given to these types of family business, and consequently little is known of the conditions necessary for a successful business relationship between married couples.

This study aims to expand on the limited information that currently exists regarding copreneurships, by investigating the demographic factors that impact on their harmonious functioning and success. It is hoped that by recognising these factors, existing and prospective copreneurs may improve their chances of success in both their business and their marriage.

DEMOGRAPHIC FACTORS AND THEIR INFLUENCE ON SUCCESS

Previous studies have produced empirical evidence to suggest that certain demographic factors have a significant impact on the ability of family members, and specifically spouses, to work together. These demographic factors include, amongst others, the age, education, gender and level of involvement of the spouses; the presence, number and age of children; and the size, tenure and nature of the business. The paragraphs to follow will include a brief description of these factors, together with supporting evidence.

The age, education, gender and level of involvement of the spouses

Features such as a person's age and gender may have an important influence on who they are, how they are treated by others, their behaviour, and their relations with other adults (Corey, 1996: 139; Frankenberg, 2003: 11). When compared to other demographic variables, age is more important to understanding family and family-business practices and processes than commonly thought (Poza, Alfred and Maheshwari, 1997: 145,147). Farrington (2009: 496) reported a significant relationship between the age of the sibling partners in her study and the growth and financial performance of the business. She suggested that younger sibling partners are more likely to make positive contributions to financial and growth performance as they are more zealous, driven, risk-averse and entrepreneurial than their older counterparts. Similarly, Davis (1982) found support for his hypothesis that the quality of work relationships between fathers and sons who work together was directly influenced by their respective life stages. In contrast, Venter (2003: 322) found no relationship between the age of her respondents, who were made up of owner-mangers and their successors, and the continued profitability of the business. Each

life stage in a person's life includes tasks essential for the development of suitable relationships, careers, and personal ambitions (Levinson, 1978).

Cowie (2007: 73-80) reported that management team members with a management qualification perceived their team meetings to be more productive and to have more effective feedback systems than those management team members without a management qualification. On the other hand, she reported no significant differences between the respondent's operational abilities or perceived success of the management team and management qualifications. Fitzgerald and Muske (2002: 13) reported that the copreneurial partners in their study had limited financial resources, and as a result were considered less successful than their non-copreneurial counterparts (Fitzgerald and Muske, 2002: 13). They suggested that the spouses' lower level of education coupled with the rural location of their businesses might explain their lower financial success. However, in their later descriptive study, Muske and Fitzgerald (2006) found that successful copreneurs tended to be older and better educated.

Foley and Powell (1997: 40) suggested that a spousal partner's outlook on his/her involvement in the copreneurial business and the family was influenced by his/her individual background. Kadis and McClendon (1991) asserted that many of the problems that arise in copreneurships are connected to the spouses' early childhood insights and misconceptions, as well as decisions made early in life. There is a propensity for copreneurs to stick to traditional models of masculinity and femininity, as well as relying on a conceptual boundary between work and family, based on gender differences, to define their roles in the two areas (Marshack, 1994). Therefore, if partners' attitudes toward traditional gender roles differ, the conceptual boundary may be more difficult to establish, and ultimately lead to work-family conflict (Foley and Powell, 1997: 40). In addition, Cowie (2007: 74) reported a significant difference between gender and the norms within the management teams who participated in her study. Female team members experienced clearer norms and expectations within their management teams than the males did.

With regard to the level of spousal involvement, there are two norms relative to decision-making. The first norm views spouses as being equal, making it suitable for them to want to participate in each other's decisions. The second norm considers the husband as the dominant party, having control over decisions (Foley and Powell, 1997: 42). It is possible that copreneurs view the decision-making process which is jointly developed and used by them, to be fair. However, if the opposite occurs and the copreneurship is dominated by one

spouse, or the spouses do not perceive the situation as being fair, conflict may arise (Foley and Powell, 1997: 42).

A copreneurial marriage that is reasonably equal in its dynamics and functioning will usually replicate this fairness in its business (Foley and Powell, 1997: 42). An equitable marriage denotes that both spouses work full-time and share household responsibilities relatively equally (Charles, 2006: 88). However, the division of household chores is often a point of contention between copreneurs, as copreneurial wives are more likely to assume the role of household manager, than their husbands (Fitzgerald and Muske, 2002: 7). Consequently, copreneurial wives have to do double duty at home and at work (Charles, 2006: 88). According to Smith (2000: 287), an equal sharing of business responsibilities coupled with an unequal sharing of household responsibilities is likely to have a negative effect on the success of the copreneurial marriage and business, owing to the frustration and burnout of the female partner (Roha and Blum, 1990).

The presence, number and age of children

Family responsibilities can be detrimental to family-business owners' ability to succeed in the business (Beach, 1989; Miller, Fitzgerald, Winter and Paul, 1999). According to Tompson and Tompson (2000: 8), evidence suggests that experiencing heightened levels of work-family conflict will have a negative influence on the personal lives and work performance of copreneurs. Van Auken and Werbel (2006) referred to the existence or nonexistence of dependants (such as children) as a key determinant of work-family conflict, as the existence of children increases the copreneurs' life commitments and creates significant time demands for the family and business dynamics (Sleeping with the boss, 2008: 68). Conflict about where the spouses should allocate their time, at the business or at home, is to be expected. Therefore, the importance of aligning family and business needs cannot be overlooked (King, 2003).

The size, tenure and nature of the business

Demographic variables such as business size, age and industry have been found to have a significant influence on management practices and business performance (Storey, 1994; Porter, 1980). It is therefore important to note that in addition to the societal culture and the background of family members, the age and size of the business, its ownerships structure and objectives also influence the make-up of the family business (Santiago, 2000: 32).

Effective teams are comprised of the minimum number of people required to get the job done. Having smaller teams facilitates better coordination, but also increases the risk of

overload if the team is not large enough (Greenberg and Baron, 2000: 281; Ivancevich, Konopaske and Matteson, 2005: 341). Fitzgerald and Muske (2002: 13) found that copreneurial businesses tended to employ fewer employees than non-copreneurial businesses (Cox, Moore and Van Auken, 1984: 25). In her study on sibling partnerships, Farrington (2009: 497) reported a significant relationship between employee numbers as well as financial and growth performance. Consequently, the more employees a sibling partnership has, the more likely it is to grow and perform well financially (Farrington, 2009: 497). In addition, Cowie (2007: 74-76) found that the more employees a business has, the more capable the management team members will be of effectively performing their tasks. In contrast, Venter (2003) and Malone (1989) found no significant relationship between the number of employees and the continued profitability of the business or business continuity planning.

In their study, Danes, Zuiker, Kean and Arbuthnot (1999: 247) reported that the age of the business positively and significantly added to tensions among business managers concerning lacking role clarity and unfair workloads. Murphy (2005: 131) found that neither the size nor the age of the family business had a significant impact on responses relating to salient family business issues. In addition, Cowie (2007: 73,80) reported no significant differences between the demographic variables *tenure* and the factors *operational efficiency* or *perceived success*. In other words, the age of the business had no influence on the ability of the management team to operate efficiently, or on the perceived success of the business. In contrast, Farrington (2009: 497) found that the longer the sibling partners in her study were involved in a business together, the more likely the business was to perform well financially.

In her study, Cowie (2007: 73, 80) reported no significant differences between the nature of the industry in which the business operated and operational efficiency or perceived success. In other words, the nature of the industry in which the business operated had no influence on the ability of the management team to operate efficiently, or on the perceived success of the business. In addition, Venter (2003: 320) reported no significant differences between the demographic variables *business sector* and the factor *continued profitability* of the business. Therefore, the sector in which the business operated had no significant influence on the continued profitability of the business.

RESEARCH METHODOLOGY

Methodology and hypotheses

Based on the discussion in the paragraphs above, it was decided to test the influence of selected demographic variables on the success of copreneurships. For the purpose of this study success was measured using three variables, namely *Financial performance*, *Growth Performance* and *Perceived success*. These variables served as the dependent variables in this study.

A structured questionnaire was made available to 1 548 potential respondents. These respondents were identified by means of the convenience snowball sampling technique. In total, 380 usable questionnaires were returned and were subjected to statistical analyses. The software programme SPSS 15 for Windows was utilised for this purpose.

In order to gauge the influence exerted on the dependent variables by the demographic variables, an Analysis of Variance (ANOVA) was performed on scales of a nominal nature, and Multiple Linear Regression analysis (MLR) was performed on scales of an ordinal nature. Three null hypotheses (H^0) were formulated in this regard:

- H^{0a} : There is no relationship between the *Demographic variables* and the perceived *financial performance* of a copreneurship.
- H^{0b} : There is no relationship between the *Demographic variables* and the *Growth performance* of a copreneurship.
- H^{0c} : There is no relationship between the *Demographic variables* and the *Perceived success* of a copreneurship.

Zikmund (2003: 524) described a t-test as a technique that is used to test whether the mean score for a variable is significantly different for two independent samples. Variations in the mean scores of the demographic variables *Gender*, *Location of the business*, *Status of the copreneurship* and *Involvement in the business* with regard to the dependent variables, were tested using t-tests. For this purpose, the following hypotheses were formulated:

- H^{0d} : There is no difference between the mean scores of *Gender*, the *Location of the business*, the *Status of the copreneurship* and the *Involvement in the business* and the perceived *Financial performance* of a copreneurship.
- H^{0e} : There is no difference between the mean scores of *Gender*, the *Location of the business*, the *Status of the copreneurship* and the *Involvement of*

in the business and the perceived *Growth performance* of a copreneurship.

H^{0f}: There is no difference between the mean scores of *Gender*, the *Location of the business*, the *Status of the copreneurship* and the *Involvement in the business* and the *Perceived success* of a copreneurship.

Measurement instrument analyses

The measuring scale developed by Farrington (2009), in her study investigating the effectiveness of sibling teams, was the primary source used to generate items to measure the dependent variables in this study, namely *Financial performance*, *Growth performance* and *Perceived success*. A literature study revealed several factors not accounted for in Farrington's (2009) scales that could influence the success of copreneurial businesses. Additional items were therefore formulated to measure these factors from a rigorous analysis of secondary sources, as well as items that had proved valid and reliable in previous empirical studies. A 7-point Likert-type interval scale was employed, and each respondent was asked to indicate the extent to which he/she agreed with each statement. The 7-point Likert-type interval scale was understood as 1 = *strongly disagree* and 7 = *strongly agree*. Items were adapted and designed to measure the factors influencing the success of copreneurships, as perceived by the respondents.

An exploratory factor analysis was conducted to determine the discriminant validity of the measuring instrument used in this study. Principal Axis factoring with an Oblimin (Oblimin with Kaiser normalisation) Rotation was specified as the extraction and rotation method. According to Hair, Black, Babin, Anderson and Tatham (2006: 128), factor loadings of 0.30 and 0.40 are considered significant for sample sizes of 350 and 200 respectively. In this study, items displaying no cross-loadings and comprising factor loadings of ≥ 0.4 , were considered significant (Mustakallio, Autio and Zahra, 2002: 214), thereby serving as evidence of construct and discriminant validity for the measuring instrument. The reliability of the measuring instrument was measured using Cronbach-alpha coefficients. Cronbach-alpha coefficients of greater than 0.70 were reported for each of the dependent variables in this study, thereby indicating that the measuring scales were reliable (Nunnally and Bernstein, 1994). Table 1 summarises the operationalisation of the dependent variables, the minimum and maximum factor loadings, and the Cronbach-alpha coefficients for each of these factors.

TABLE 1
MEASUREMENT INSTRUMENT ANALYSES

Operationalisation of dependent variables	Items	Factor loadings	Cronbach-alpha
<i>Financial performance</i> refers to the copreneurial business being financially profitable and secure.	3	Min: 0.640 Max: 0.983	0.872
<i>Growth performance</i> is operationalised as positive trends of growth in the number of employees and profits, as well as increasing revenue experienced by the copreneurial business.	3	Min: 0.483 Max: 0.839	0.700
<i>Perceived success</i> refers to the copreneurs experiencing their ongoing involvement in the copreneurship as satisfying and rewarding, as well as beneficial to their family, marriage, and personal development.	7	Min: 0.488 Max: 0.860	0.885

The measuring instrument included several questions concerning the demographic information about the respondent and the copreneurial business. The information requested concerning the respondent included the respondent's gender, ethnicity, age, and involvement in the business. The information requested concerning the copreneurial business included the status of the copreneurship, the tenure of the business, location of the business, leadership, number of employees, and activities of the business. In addition, information relating to the family, such as the stage of the children, number of children, and length of time married, was requested. The demographic variables mentioned above each comprised several categories.

EMPIRICAL RESULTS

Sample description: Respondent demographics

More than half (55%) of the respondents in the present study were female (wives), while the male (husbands) respondents accounted for only 45% of the sample. With regard to ethnic background, most of the respondents (97.9%) were white, while the remaining 2.1% of the respondents were non-white.

The majority of the respondents in this study were either between the ages of 41 and 50 years old (37.1%) or between 51 and 60 years old (32.2%). The remaining respondents were between the ages of 25 and 30 years old (2%), and 31 and 40 years old (14.8%). Interestingly, 14.3% of the respondents indicated that they were 61 years or older, thereby demonstrating their desire to remain involved in their business past the age of retirement. A possible explanation for so many respondents being 65 years or older has been provided by Stewart-Gross and Gross (2007: 9), who suggest that more and more individuals are now delaying retirement until much later in life, as they have become focused on “What’s next?” or “the next stage in life.” Self-employment in the form of a copreneurship may provide them with the opportunity to transition to the so-called “second-half” of their lives. Another possible explanation was provided by Van Duijn, Breunese and Malindz (2007: 13), who noted that many family businesses did not have proper succession plans in place, or there might be no willing family members to take over the business (Rwigema and Venter, 2004: 486). In addition, the vast majority (92.1%) of the respondents indicated that they were actively employed in their copreneurial business, and received a salary from it. The remaining respondents were either not employed by their copreneurial business, but were actively involved in decision-making (7.6%), or were not involved in the copreneurial business at all (0.3%).

Sample description: Copreneurial business demographics

Almost all (96.8%) of the respondents were in a copreneurial business with their spouse at the time of completing the questionnaire, while 3.2% of the respondents were no longer in a copreneurial business. Most of the respondents had been in business for between 1 and 10 years (48.7%) or 11 and 20 years (33.1%), while the remaining respondents’ business tenure was between 21 and 30 years (11.9%) or 31 and 40 years (6.5%). As far as the business location was concerned, 73.9% of the respondents operated their business away from the family home, while the rest of the respondents (26.1%) worked from the family home.

Most of the respondents indicated that the leadership of their business was either shared equally by the spouses (32.1%) or that the spouse with the most knowledge took the lead (31.8%). The rest of the respondents indicated that the spouse with the strongest personality (10.8%), the most leadership skills (8.2%) or the longest involvement in the business (6.6%) took the lead in their business. Interestingly, 10.5% of the respondents indicated that because of traditional gender roles, the man was the leader in their copreneurial business. All of the respondents employed fewer than 200 employees in their copreneurial business. The areas of business activity to receive the greatest response were retail, motor trade and

repair services (29.5%), as well as catering, accommodation, restaurants or fast food (21.6%).

Sample description: Family demographics

When indicating the age of their children, just more than half (50.5%) of the respondents in this study indicated that their children were 19 years old or older. The rest of the respondents' children were toddlers (1.8%), in pre-primary and/or primary school (6.3%) or in high school (5.8%). With regard to the number of children, some respondents indicated that they had no children or did not respond (5.8%). The majority of the respondents had either two (44.8%) or three (29.7%) children, while a few respondents had no children (4.5%), a single child (7.4%) or more than four children (11.3%).

A mere 10.5% of the respondents had been married for less than 10 years, while most had been married for between 11 and 20 years (22.3%), 21 and 30 years (36.4%), and 31 and 40 years (24%). Only 6.8% of the respondents had been married for more than 41 years.

Results of the analysis of variance (ANOVA)

The influence exerted by the nominally scaled demographic variables on the *Financial performance*, *Growth performance* and *Perceived success* of a copreneurship, was determined by an Analysis of Variance (ANOVA). The nominally scaled variables included:

- *Activities of the copreneurship*;
- *Stage of the children* (refers to toddler, preschool, primary school, high school or adult); and
- *Leadership* (refers to the copreneurships being led by one of the spouses or leadership of the copreneurship being shared equally).

Table 2 illustrates that the ANOVA showed that none of the three independent variables (*Activities of the copreneurship*, *Stage of the children* and *Leadership*) exerted a significant positive influence on the *financial performance* of the copreneurship.

**TABLE 2
INFLUENCE OF NOMINALLY SCALED DEMOGRAPHIC VARIABLES ON FINANCIAL PERFORMANCE**

Dependent variable: Financial performance		
Independent variables	F-value	Sig.(p)

Activities of the copreneurship	0.576	0.798
Stage of the children	0.994	0.429
Leadership	0.780	0.564

Similar to the outcome between the independent variables and *Financial performance*, the ANOVA did not show any significant relationships between the independent variables (*Activities of the copreneurship*, *Stage of the children* and *Leadership*) and the *Growth performance* of the copreneurship (See Table 3).

TABLE 3
INFLUENCE OF NOMINALLY SCALED DEMOGRAPHIC VARIABLES ON GROWTH PERFORMANCE

Dependent variable: Growth performance		
Independent variables	F-value	Sig.(p)
Activities of the copreneurship	1.482	0.162
Stage of the children	0.711	0.641
Leadership	0.355	0.879

Table 4 portrays the results of the ANOVA between the independent variables (*Activities of the copreneurship*, *Stage of the children* and *Leadership*), and the *Perceived success* of the copreneurship. The independent variables *Activities of the copreneurship* and *Stage of the children* did not exert a significant influence on the *Perceived success* of the copreneurship. However, a significant relationship did emerge between the independent variable *Leadership* and *Perceived success* ($p < 0.01$). A *post-hoc* Scheffe test revealed that at the 1% significance level ($p = 0.092$), the mean score for the *Perceived success* of the business was significantly higher in copreneurships where the leadership was shared equally ($\bar{x} = 6.18$), than in copreneurships where the leadership was defined according to traditional gender roles ($\bar{x} = 5.54$). In other words, businesses in which the spouses shared the leadership equally were experienced as more satisfying and beneficial than those businesses that were led by the husband only.

TABLE 4

INFLUENCE OF NOMINALLY SCALED DEMOGRAPHIC VARIABLES ON PERCEIVED SUCCESS

Dependent variable: Perceived success		
Independent variables	F-value	Sig.(p)
Activities of the copreneurship	0.738	0.658
Stage of the children	1.993	0.066
Leadership	3.373	0.005**

(*p<0.05; **p<0.01)

Results of the Multiple Linear Regression Analysis (MLR)

Multiple Linear Regression analysis was carried out to determine if the following ordinally scaled variables had a significant influence on the dependent variables (*Financial performance, Growth performance and Perceived success*), namely:

- *Age of the respondent;*
- *Tenure of the business* (refers to how long the copreneurs have been in business together);
- *Number of employees;*
- *Number of children;* and
- *Length of time married.*

The demographic variables listed above explained 1.16% of the variance in the *Financial performance* of the business. Table 5 illustrates a significant positive linear relationship (2.51; p<0.05) between the *Tenure of the business* and *Financial performance*. As the relationship is positive, it suggests that the longer the business was operational, the more likely it would be perceived as performing well financially.

A second significant positive linear relationship (4.55; p<0.001) emerged between the *Number of employees* and *Financial performance*. This result implies that the higher the number of people employed in the business, the more likely the business was to be perceived as performing well financially.

TABLE 5

INFLUENCE OF THE ORDINALLY SCALED DEMOGRAPHIC VARIABLES ON FINANCIAL PERFORMANCE

Dependent variable: Financial performance			R-square = 0.116
Independent variables	SC.beta	t-value	Sig.(p)
Constant		15.396	0.000
Age of the respondent	0.013	0.145	0.884
Tenure of the business	0.149	2.506	0.013*
Number of employees	0.229	4.546	0.000**
Number of children	0.018	0.348	0.728
Length of time married	0.093	1.028	0.305

(*p<0.05; **p<0.001)

According to Table 6, the demographic variables included in this analysis explain 7.6% of the variance in the *Growth performance* of the business. The only independent variable that emerged as having an influence on the *Growth performance* of the business was the *Number of employees*, as a significant positive linear relationship (4.87; p<0.001) was reported. In other words, the greater the number of people employed in the business, the more likely the business was to experience *Growth performance*. Empirical evidence to support these findings was found by Farrington (2009: 473) in her study on Sibling Partnerships.

TABLE 6

INFLUENCE OF THE ORDINALLY SCALED DEMOGRAPHIC VARIABLES ON GROWTH PERFORMANCE

Dependent variable: Growth performance			R-square = 0.076
Independent variables	SC.beta	t-value	Sig.(p)
Constant		14.421	0.000
Age of the respondent	-0.102	-1.090	0.276
Tenure of the business	0.041	0.670	0.503
Number of employees	0.250	4.871	0.000**
Number of children	0.048	0.913	0.362
Length of time married	0.036	0.385	0.700

(*p<0.05; **p<0.001)

In Table 7 below, the demographic variables included in this analysis explain 1.8% of the variance in the *Perceived success* of the copreneurship. Unlike the results between the independent variables and the dependent variables *Financial performance* and *Growth*

performance, no significant linear relationships emerged between the independent variables and *Perceived success*. In other words, the respondents' age, the length of time that the business had been operational, the number of people employed in the business, the number of children the respondents had and the length of their marriage, had no significant influence on whether the spouses experienced their involvement as being satisfying and beneficial to their family, marriage and personal development.

TABLE 7
INFLUENCE OF THE ORDINALLY SCALED DEMOGRAPHIC VARIABLES ON PERCEIVED SUCCESS

Dependent variable: Perceived success		R-square = 0.018	
Independent variables	SC.beta	t-value	Sig.(p)
Constant		17.569	0.000
Age of the respondent	-0.016	-0.166	0.868
Tenure of the business	0.116	1.846	0.066
Number of employees	0.001	0.023	0.982
Number of children	0.063	1.156	0.248
Length of time married	0.014	0.144	0.886

Results of the t-tests

T-tests were performed in order to determine if the respondents' perceptions of *Financial performance*, *Growth performance* and *Perceived success* varied with regard to:

- *Gender*
- The *Location of the business* (refers to the copreneurship being operated from the spouses home or not)
- The *Status of the copreneurship* (refers to whether or not the respondent was still in business with his/her spouse at the time of taking part in the study), and
- The *Involvement in the business* (refers to whether a spouse was actively involved in the decision-making of the copreneurship and whether he/she was actively employed by the copreneurship or not).

It can be seen in Table 8 that the t-test revealed significant differences ($p < 0.05$) between the means reported by respondents who operated their business from home and those who operated their business on a premises away from the home (i.e. the *Location of the business*), with regard to *Financial performance* and *Growth performance*. Respondents who operated their business on premises away from the home reported higher means for

Financial performance ($\bar{x} = 6.04$) and *Growth performance* ($\bar{x} = 5.74$) than those respondents operating their business from home, who reported means of ($\bar{x} = 5.83$) for *Financial performance* and ($\bar{x} = 5.38$) for *Growth performance*. In other words, those respondents who operated their business away from the home perceived the financial and growth performance of their business as being better than that of their counterparts who operated from home.

A t-test also revealed significant differences ($p < 0.05$) between the means reported by respondents who were currently in business with their spouse and those who had previously been in business with their spouse (i.e. *the Status of the copreneurship*) with regard to *Perceived success*. Copreneurships who were currently still in business together reported a significantly higher mean for *Perceived success* ($\bar{x} = 5.98$) than those where the copreneurships no longer existed ($\bar{x} = 5.27$). This result demonstrates that the *Perceived success* of copreneurships no longer in business together was significantly lower in their final year than those copreneurships still in business together. This result may provide a possible justification as to why these spouses were no longer in business together. A similar result was reported by Farrington (2009: 476) in her study on Sibling Partnerships, where respondents who were no longer in business together reported lower means for satisfaction with work and family relationships than those who were still in business together.

TABLE 8
INFLUENCE OF GENDER, LOCATION OF THE BUSINESS, STATUS OF THE COPRENEURSHIP AND INVOLVEMENT IN THE BUSINESS ON FINANCIAL PERFORMANCE, GROWTH PERFORMANCE AND PERCEIVED SUCCESS

Dependent variable: Financial performance		
Independent variables	t-value	Sig.(p)
Gender	-0.237	0.813
Location of the business	-2.187	0.029*
Status of the copreneurship	1.007	0.314
Involvement in the business	3.557	0.000**
Dependent variable: Growth performance		
Independent variables	t-value	Sig.(p)
Gender	-1.443	0.150
Location of the business	-2.471	0.014*
Status of the copreneurship	-0.538	0.591

Involvement in the business	2.567	0.011*
Dependent variables: Perceived success		
Independent variables	t-value	Sig.(p)
Gender	1.355	0.176
Location of the business	0.482	0.630
Status of the copreneurship	2.497	0.013*
Involvement in the business	-0.768	0.443

(*p<0.05; **p<0.001)

Table 8 also illustrates significant differences between the means reported by those respondents who were actively employed in the business and those who were inactive, but actively involved in the decision-making of the business (i.e. *Involvement in the business*), with regard to *Financial performance* ($p < 0.001$) and *Growth performance* ($p < 0.05$). Those spouses who were actively employed in their business reported significantly higher means for *Financial performance* ($\bar{x} = 6.09$) and *Growth performance* ($\bar{x} = 5.69$) than those respondents who were not actively employed in their business. Respondents not actively employed in the copreneurship reported means of $\bar{x} = 5.37$ and $\bar{x} = 5.09$ for *Financial performance* and *Growth performance* respectively. In other words, the respondents who were actively employed in their business perceived the financial and growth performance of their business as being better than those not actively involved in the business.

SUMMARY OF HYPOTHESIS TESTING

The null hypothesis that the demographic variables did not influence the *Financial performance* (H^{0a}) of the copreneurship could be accepted for *Activities of the copreneurship*, the *Stage of the children* and *Leadership*, as well as the *Age of the respondents*, the *Number of children* and the *Length of time married*. The null hypothesis (H^{0a}) was, however, rejected for the *Tenure of the business* and the *Number of employees*.

Likewise, the null hypothesis that demographic variables did not influence the *Growth performance* (H^{0b}) of the copreneurship was accepted for the *Activities of the copreneurship*, the *Stage of the children* and *Leadership*, in addition to the *Age of the respondents*, the *Tenure of the business*, the *Number of children* and the *Length of time married*. On the other hand, the null hypothesis (H^{0b}) was rejected for the *Number of employees*.

In addition, the null hypothesis that demographic variables did not influence the *Perceived success* (H^{0c}) of the copreneurship was accepted for the *Activities of the copreneurship* and

the *Stage of the children*, together with the *Age of the respondents*, the *Tenure of the business*, the *Number of employees*, the *Number of children* and the *Length of time married*. The null hypothesis (H^{0c}) was, however, rejected for *Leadership*.

The influence of certain demographic variables on the *Financial and Growth performance*, as well as on the *Perceived success* of the copreneurship was revealed using t-tests. It was found that the perceptions of *Financial and Growth performance* differed depending on the *Location of the business* and the *Involvement in the business*. Therefore, the null hypotheses that there were no differences between the mean scores of *Gender* and the *Status of the copreneurship*, and the perceived *Financial* (H^{0d}) and *Growth performance* (H^{0e}) of a copreneurship, could be accepted. The null hypotheses (H^{0d}) and (H^{0e}) had, however, to be rejected in the case of the *Location of the business* and the *Involvement in the business*. Similarly, it emerged that the perceptions of *Perceived success* differed depending on the *Status of the copreneurship*. Consequently, the null hypothesis that there were no differences between the mean scores of *Gender*, the *Location of the business* and the *Involvement in the business* and the *Perceived success* (H^{0f}) of a copreneurship had to be accepted. On the other hand, the null hypothesis (H^{0f}) had to be rejected in the case of the *Status of the copreneurship*.

As a result of several relationships emerging between the demographic variables and the dependent variables, attention should be given to the demographic composition of the copreneurial team, as well as aspects relating to their family and their business.

CONCLUSIONS AND RECOMMENDATIONS

In the present study, numerous demographic variables were identified by the ANOVA, the Multiple Linear Regression analysis and the t-tests, as having a significant influence on the success of copreneurships.

The results of this study revealed that *Leadership* had a significant influence on the *Perceived success* of a copreneurship. Therefore, the way in which leadership occurs in a copreneurial business has a significant influence on the perceived success of a copreneurship. Spouses who share the leadership of their business equally are more likely to experience their involvement in the copreneurship as being satisfying and beneficial to their family, marriage and personal development than those copreneurs who are led by the husband only. Although husbands are inclined to be the main decision-makers in copreneurial businesses (O'Connor, Hamouda, McKeon, Henry and Johnston, 2006), it is best if leadership emerges naturally between the spouses. The leader should be at ease

with power, as well as being the most competent person to take the lead. In addition to being inspirational, considerate and participatory, the leader should be a trustworthy decision-maker. Copreneurs thus should strive for equal leadership between them, by ensuring that the wife is recognised as a full and equal partner. This requires that they acknowledge the possibility that wives have similar educational levels, professional expertise, knowledge and eagerness for running a business as their husbands.

Empirical support has been found showing that the *Tenure of the business* had a significant influence on the *Financial performance* of the copreneurship. Therefore, the longer the business has been operational, the more likely it is to be perceived as performing well financially. Copreneurs will gain experience and knowledge as their business grows and its tenure increases. This increased experience and knowledge should be implemented to manage the copreneurial business more effectively and increase its revenue. In addition, the *Number of employees* exerted a significant influence on the *Financial and Growth performance* of the copreneurship. Therefore, the greater the number of people employed in the business, the more likely the business is to be perceived as performing well financially, as well as experiencing growth. It is thus critically important for copreneurs to hire additional employees in their business. Employees, whether family or non-family members, make essential contributions to the business by bringing additional information, experience and expertise to the business, as well as increasing its capacity. In order to attract and retain key employees, it is essential that copreneurs establish proper human resource policies and procedures for the business, as well as being fair and objective in their employee relations.

The statistical analysis conducted revealed differences in the perceptions of *Financial and Growth performance*, depending on the *Location of the business* and the respondents' *Involvement in the business*. The location of the copreneurial business had a significant positive influence on the financial and growth performance of the business. Copreneurs who operated their business away from their home perceived the financial and growth performance of their business as being better than that of their counterparts who operated their businesses from home. Working with a spouse is challenging as the emotional risks are high. It is therefore essential that copreneurs establish boundaries between their personal and work lives. Operating the business away from the family home presents such boundaries by allowing spouses to decompress during the drive home, to discuss business only at the office, and have set work hours, outside of which no work may be done. Operating away from the home also allows for further expansion of the business, which may explain the increase in financial and growth performance reported by the respondents in this study. With regard to *Involvement in the business*, spouses who were actively employed in

their business perceived the financial and growth performance of the business as being better than those who were inactive. Therefore, in order for a copreneurial business to perform financially and grow, spouses must both be actively involved in their business and dedicated to ensuring its continued success. Copreneurs should embrace the business as a way of life, and remember that a copreneurial business is not a normal “8 to 5” job; it is a lifestyle that causes the personal and business lives of the spouses to become intertwined.

The respondents’ perceptions of whether their involvement in the business was satisfying and beneficial to their family, marriage and personal development, differed depending on the *Status of the copreneurship*. Therefore, copreneurs who are currently still in business together experience their involvement in the business as being more satisfying and beneficial to their family, marriage and personal development than those whose business no longer exists. This outcome provides a possible contributing factor to the dissolution of some of the copreneurships in this study.

In summary, copreneurs should strive to share the leadership of their business equally, operate their business from premises away from their home, and take an active role in the business operations.

LIMITATIONS AND FUTURE RESEARCH

This study’s complete focus on the individual, family and business demographics influencing the successful functioning of copreneurial partnerships is its most important limitation. In order to make the study more comprehensive, other relational- and organisational-based factors should be investigated. The use of the convenience sampling technique also proved to be a limitation of this study as the findings cannot be generalised to all family-business types. Future studies should endeavour to establish a database that is more comprehensive, thereby enabling the selection of probability samples. The demographic characteristics of the respondents in this study were homogeneous in nature. For example, the respondents were predominantly white (ethnicity). Future studies concerning copreneurships should investigate the influence of demographic factors on the success of non-white copreneurships. The demographic factors that influence the success of copreneurships in countries other than South Africa also present an opportunity for future research. The extent to which the factors influencing the success of copreneurships in South Africa differ from those influencing the same kind of partnerships overseas, could be established. The influence of culture on South African copreneurships, as well as copreneurships abroad, is an additional avenue for future research. Even though several limitations to this study have been identified, the results still

make a significant contribution to the existing body of research on copreneurships. As such, many opportunities for future investigation into copreneurships exist.

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BARRIERS TO THE GROWTH OF NEW SMALL VENTURES IN SOUTH AFRICA: A PRINCIPAL COMPONENT ANALYSIS APPROACH

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ABSTRACT

The paper investigated the barriers to growth of new small ventures in South Africa using the principal component analysis (PCA) approach. New small ventures or enterprises are those that have 11 – 50 employees and have been in existence for 3 to 42 months. They have paid salaries or wages for longer than three months. These small ventures are seen as a significant component of the solution to South Africa's development issues. However, most new small ventures do not grow; their failure rate in South Africa is 75% which is one of the highest in the world. The objective of the study was to investigate the internal and external environmental barriers to the growth of new small ventures. As a new business is established and develops, it exists and survives in an environment characterised by both internal and external factors which impact negatively on the new business's survival. Thirty variables were identified as barriers. The principal component analysis with varimax rotation was used to reduce the variables to five clusters. The most severe barrier was termed Financial which is largely an internal factor. The other barriers respectively as determined by

the PCA were Economic (external), Markets (external) Management (internal) and Infrastructure (external).

Keywords: New small ventures, growth, external and internal environment and principal component analysis

Abbreviations: PCA, SMEs, IT, CPI, SEDA, BTS, DTI, PC, KMO, HR.

INTRODUCTION

Small ventures are increasingly seen as playing an important role in the economies of many countries. Thus, governments throughout the world focus on the development of the ventures to promote economic growth. In South Africa, small ventures contribute 56% of private sector employment and 36% of the gross domestic product (Ntsika, 2002). South Africa suffers from high unemployment with an official estimate of approximately 24.5% of the economically active population unemployed (Statistics South Africa, Quarterly Labour Force Survey, 2009). One of the best ways to address unemployment is to leverage the employment creation potential of small businesses and to promote small business development (FinMark Trust, 2006).

Gree and Thurnik (2003:243) argue that the contribution of the small enterprises sector cannot be sustained without the creation of new ventures. Schumpeter (1934) as cited in Wong, Ho and Autio (2005) was one of the earliest economists to argue for new firm creation. According to Schumpeter (1934), new firms are the vital force behind the progress of capitalism. The innovative activity of entrepreneurs feeds a creative “destruction process” by causing constant disturbances to an economic system in equilibrium, creating opportunities for economic rent. New ventures introduce new products and develop new technologies. As an important source of innovation, new firms bring competitive pressure to bear on established firms. According to Maas and Herrington (2006) new ventures are seen as a significant component of the solution to South Africa’s development issues. The creation and sustainability of new ventures are vital to the economic prosperity of South Africa. Without the creation of new ventures, South Africa risks economic stagnation. Given the failure of the formal and public sector to absorb the growing number of job seekers in South Africa, increasing attention has focused on entrepreneurship and new firm creation and its potential for contributing to economic growth and job creation (Herrington et al, 2009).

EMPIRICAL LITERATURES

Theories of growth

There are many different definitions of business growth and ways of measuring this growth (Delmar and Wiklund, 2008). Business growth is typically defined and measured, using absolute or relative changes in sales, assets, employment, productivity, profits and profit margins. Sales data are usually readily available and business owners themselves attach high importance to sales as an indicator of business performance. In addition, sales growth is also easier to measure compared with some other indices and is much more likely to be recorded. Sales are a good indicator of size and, therefore, growth. Sales may also be considered a precise indicator of how a firm is competing relative to their market (Barringer, Jones, Neubaum & Donald, 2005). According to Churchill and Lewis (1983), as a new small firm starts and develops, it moves through some growth stages, each with its own distinctive characteristics. Churchill and Lewis (1983) identify five stages of growth: existence, survival, success, take-off and resource maturity. In each stage of development a different set of factors is critical to the firm's survival and success. The Churchill Lewis model (1983) gives an insight into the dynamics of small business growth, including the distinguishing characteristics, problems and requirements of growing small ventures and explains business growth processes amongst small ventures. The precise moment in time in which a start-up venture becomes a new business has not yet been theoretically determined. However, the idea of business survival could be equated with a firm that has fully completed the transition to stage-two organisation in the five stages of small business growth. The real issue in new firm growth is that most new small ventures in South Africa do not move from the first stage (existence) to other stages such as survival, success, take off and resource maturity (Brink, Ligthelm & Cant, 2003).

In South Africa, Berry, Von Blottnitz, Cassim, Kesper, Rajaratnam and Van Seventer (2002) argue that new ventures are unlikely to be a panacea for South Africa's economic problems and they query the degree to which small ventures fulfil all the government prescribed roles. Despite the best effort of the South African government, new ventures have achieved limited growth. The Accelerated and Shared Growth Initiative South Africa (2009) indicates that on average a growth rate of 5% between 2004 and 2014 is needed to achieve the social objective of the government and expects small ventures to contribute significantly to the expected growth rate. However, new small ventures do not always contribute towards the promotion of economic growth. Although small ventures exhibit higher growth rates in percentage terms, most new small firms do not grow at all as they are established as last resort (necessity) rather than first choice (opportunity).

Maas and Herrington (2006) observe that the creation of a new firm is a two-stage process. The first phase is the start-up phase, a three month period during which individuals identify the products or services that the firm will trade in, access resources and put in place the necessary infrastructure such as staff. The next phase, a period of 3-42 months, is when the business begins to trade and compete with other firms in the market place. Therefore, a new venture can be described as one that has been in existence for less than forty two months. Once a firm has successfully existed for more than 42 months, it becomes an established firm. In addition, a new venture in South Africa must meet the qualitative and quantitative definitions of SMEs as prescribed by the National Small Business Act.

The National Small Business Act of South Africa of 1996, as amended in 2003, describes an SME as *“a separate and distinct entity including cooperative enterprises and non-governmental organisations managed by one owner or more, including its branches or subsidiaries if any is predominantly carried out in any sector or sub-sector of the economy mentioned in the schedule of size standards, and can be classified as an SME by satisfying the criteria mentioned in the schedule of size standards”* (Government Gazette of the Republic of South Africa, 2003). The quantitative definition of small ventures in South Africa is expressed in Table 1.

Table 1 Schedule of size standards for the definition of SMEs in South Africa

Type of firm	Employees	Turnover	Balance sheet
Small	1-49	Maximum R13m	Maximum R5m
Medium	51-200	Maximum R51m	Maximum R19m

Source: Government Gazette of the Republic of South Africa, 2003

The business environment

According to Delmar and Wiklund (2008) the business environment has a significant impact on the growth of new small enterprises. Smit, Cronje, Brevis and Vrba (2007) define a business environment as all those factors or variables, both inside and outside the organization that may influence the continued and successful existence of the organization. Beck and Demirguc-Kunt (2006) argue that for new ventures to grow, it is important to strengthen not only the internal business environment but also the external environment. Changes in the business environment have either a negative or positive effect on the growth or failure of small ventures in much of Africa (World Bank, 2006). This business environment can be divided into the internal and external environment.

Internal environment

These are factors in a firm's environment that are largely controllable by the firm. The internal environment includes factors such as finance (especially internal finance such as owner's equity contribution and collateral), managerial competency of the owner, location, investment in information technology, cost of production and networking (Cassar, 2004), (Barbosa & Moraes, 2004).

Access to finance

All businesses require financial resources in order to start trading and to fund growth. Lack of access or availability can be a constraint on business growth (Cassar, 2004). Whether business owners can access adequate and appropriate finance to grow is a particular concern for policymakers. Stiglitz and Weiss (1981) termed the lack of finance as the finance gap. Inadequate funding to start a business has been indicated as a primary barrier to starting a new business for many potential entrepreneurs. Indications are that many entrepreneurs raise the start-up capital from their own or family savings rather than approaching formal institutions or agencies. Financial institutions generally require collateral and formal business records as criteria for considering a loan. As a result, business owners who lack collateral or who have not kept formal records from their businesses are less likely to be successful in approaching financial institutions for funding (GEM 2008).

FinMark Trust (2006) finds that only 2% of new ventures in South Africa are able to access bank loans. Foxcroft, Wood, Kew, Herrington and Segal (2002) find that 75% of applications for bank credit by new small ventures in South Africa are rejected. This suggests that new ventures without finance may not be able to survive and grow.

Management skills

Managerial competencies are sets of knowledge, skills, behaviors and attitudes that contribute to personal effectiveness (Hellriegel, Jackson, Slocum, Staude, Amos, Klopper, Louw & Oosthuizen, 2008). Managerial competencies are very important to the survival and growth of new ventures. Martin and Staines (2008) find that lack of managerial experience and skills are the main reasons why new firms fail. In South Africa, Herrington and Wood (2003) point out that lack of education and training has reduced management capacity in new firms in South Africa. This is one of the reasons for the low level of entrepreneurial creation and the high failure rate of new ventures.

Location and networking

Location also impacts on the market potential and growth opportunities of new firms. Geographical proximity to either critical buyers or suppliers produces a form of enhanced environmental scanning that enables new firms to more easily identify and exploit growth opportunities in the market. This impacts the market prospect of new firms (Dahl & Sorenson, 2007). Networking is very important to small ventures both new and established and can positively impact on their performance and access to finance. Okten and Osili (2004) find that the formation of networks helps entrepreneurs to tap resources in external environment successfully. Shane and Cable (2002) agree that networking can be used to reduce information asymmetry in creditor/debtor relationships. In addition, networks increase a firm's legitimacy, which in turn positively influences the firm's access to external financing. Ngoc Le and Nguyen (2009) point out that in the absence of effective market institutions, networks play an important role in spreading knowledge about a firm's existence and its practices. Networks also help a firm learn appropriate behaviour and therefore obtain needed support from key stakeholders and the general public. This suggests that networking can positively impact on the growth of new ventures.

Investment in information technology and cost of production

Investment in technology and keeping up with information technology is increasingly important to all firms. Technology plays a crucial role in the development of new ventures. Technology not only helps in evolving a multi-pronged strategy but also in maximising business opportunities. IT is perceived as essential to achieve sales. The use of technology involves cost. Computer hardware and software need to be bought and installed. New ventures without access to capital may find it difficult to purchase necessary technology (Phillips & Wade, 2008). Smallbone, Leig and North (2003) find that the cost of production can affect the growth of new ventures. Rising cost of inputs in South Africa especially the cost of electricity and petroleum can constrain growth. Close monitoring of costs of production is necessary in order to reduce wastage and determine the most efficient means of production.

External environment

Beck (2007) argues that the performance of new ventures can be influenced by both firm-specific (internal factors) and systemic factors (external factors). Systemic factors or state variables include factors such as the contractual and informational frameworks, macroeconomic environment, social factors (crime, corruption and ethics) technology and the regulatory environment. These state variables are largely uncontrollable by new ventures.

Economic variables and markets

Economic factors have a direct impact on the potential attractiveness of various strategies and consumption patterns in the economy and have significant and unequal effects on organisations in different industries and in different locations. Economic variables include the fiscal and monetary policies of the government, inflation, interest rates, and foreign exchange rates. These variables influence the demand for goods and services and hence the growth of new ventures (Ehlers & Lazenby, 2007). South Africa's current economic environment is characterised not only by high interest rates but also by low growth rates (low consumption) high inflation rates and declining exchange rates. To survive and achieve success, new firms need to understand the dynamics of competition in their industry and develop skills and competencies that give them a competitive advantage. Therefore, managers of new firms have to scan and interpret environmental changes (especially the extent of present or future competition) to maintain their firms' viability and performance (Zahra, Neubaum & El-Hagrassey, 2002).

Crime and corruption

The United Nations Office of Drugs and Crime (2007) points out that South Africa has the dubious distinction of being amongst the world's five most-murderous nations. Brown (2001) points out that business is the largest organised group suffering from crime and violence. The effect of crime on business in South Africa is not only alarming but also growing. According to the South African Police Service Crime Statistics (2009), while the incidences of virtually all major categories of crime has fallen during the past year, business related crime is on the increase. Most of these robberies were on small business premises. A survey sponsored by Standard Bank and Fujitsu Siemens Computers (2009) finds that owners of small ventures are not aggressively pursuing avenues to grow their market shares and stay ahead of competitors. Rather they are focusing on operational matters because of the high crime rate. Furthermore, crime increases expenditures or investments in security measures to eliminate or minimise the likelihood of crime. According to Transparency International (2008), corruption both in the public and private establishments is growing in South Africa. The Corruption Perception Index (CPI) published annually by Transparency International ranks South Africa in the 43rd with a CPI of 5.1. Gaviria (2002) argues that the reason why small ventures engage in corruption is often linked to problems with regulatory compliance and bureaucracy. Small ventures lack the bargaining power and the influence to oppose requests for unofficial payments and similar solicitations. The World Bank (2005) found that about 70% of small ventures perceive corruption as an impediment to their business compared to approximately 60% for large firms.

Labour, infrastructure and regulations

New small ventures require access to a pool of suitably-skilled and suitably-motivated labour in order to sustain growth. Mahadea (2008) finds that it is difficult and expensive for small ventures to hire skilled labour in South Africa. Labour can only be hired at a cost and within the confines of the labour regulations such as the Employment and Minimum Wage Regulations. The quality of infrastructure can affect the growth prospects of new ventures especially in developing countries such as South Africa. Many developing countries suffer from deplorable state of basic infrastructure like transportation, telecommunication and electricity. Electricity supply in South Africa does not meet the demand leading to power cuts which can affect the production and turnover of new ventures (Kalra, 2009). In addition, the cost of regulation may impact on the growth of new firms. New ventures have to obtain registration licences and pay taxes (Hashi, 2001). Most, new ventures also perceive that they do not get enough support from the government. According to Maas and Herrington (2006) most new ventures in South Africa are not aware of government efforts to assist them such as Khula Finance Enterprise (Khula) and Small Business Development Agency (SEDA).

STATEMENT OF THE PROBLEM

However, despite the noted contributions of new small ventures, their failure rate in South Africa is one of the highest in the world (GEM, 2004). About 75% of new ventures in South Africa do not become established firms. According to Von Broembsen, Wood and Herrington (2005) the probability of a new venture surviving beyond 42 months is less likely in South Africa than in any other GEM sampled country. This implies that new ventures will not be able to fulfil their developmental roles in South Africa. The focus of this study therefore was to investigate the barriers to the growth of new ventures in South Africa. This study used the principal component analysis (PCA) approach. PCA is often used to group together variables that are highly correlated into principal components and, as a result, bring a simplification to analysis. Five variables emerged as the dominant factors that cause new small ventures to fail at their early stages. PCA brought out five factors for analysis (refer to section 6.2 and explanation on Table 4 results).

RESEARCH OBJECTIVES

- To evaluate the internal environmental factors (namely access to finance, management skills, networking, investment in information technology and cost of production) that are barriers to growth of new small ventures in South Africa.

- To evaluate the external environmental factors (namely economic environment, markets, infrastructure, crime, corruption, labour and regulations) that are barriers to the growth of new small ventures in South Africa.

RESEARCH METHODOLOGY

This study consists of two basic components as part of the research methodology. It consists of a literature review and an empirical study. The empirical approach consists of primary research and collection of data through the use of questionnaires. Self-administered questionnaires were delivered to respondents who completed them and the interviewer collected them at an appointed time. The questionnaire comprised structured questions which made it easy for the respondents to indicate their views. The use of five-point Likert scale questions enabled respondents to indicate their opinion on various factors of the business environment that impact on the growth of new ventures. Reliability and validity are undoubtedly the hallmarks of good measurements and the keys to assessing the trustworthiness of any research study (Cant, *et al.* 2005). First the questionnaire was pre-tested in a pilot study. In addition, the reliability of the study was ensured by using the Cronbach's alpha.

A questionnaire is advantageous because of the range of information that can be collected, the low costs of administering it, and the effort required to collect the data. Good questionnaires enable researchers to collect reliable and valid information. However, the questionnaire also has the disadvantage that respondents might ignore it and not complete it at all and in certain cases there will be missing values. Thus the response rate to the questionnaire is estimated at between 70% and 80% (Cant *et al.* 2005).

Research Design

This study used the quantitative research design which Ghauri and Gronhaug (2005) describe as studies whose findings are mainly the product of statistical summary and analysis. Quantitative research places a heavy emphasis on the use of structured questionnaires (Hair *et al.* 2008). Quantitative research methods deal with problems that are specific and well defined and the decision maker and researcher have agreed on the precise information needs. They are mostly used with descriptive and casual research designs. Descriptive statistics were used to describe the main features of the collection of data in quantitative terms. Descriptive statistics provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data. Descriptive statistics help to simplify large amounts of data in a

sensible way. Each descriptive statistic reduces a lot of data into a simpler summary (Gerber-Nel *et al.* 2005).

Population

Population refers to the total group of people or all elements about which information is needed (Cant, *et al* 2005). On the other hand, a sample represents the elements of the target population. The population was very difficult to determine with certainty. The Enterprise Directory (2008) sponsored by DTI, provided statistics of black SMEs only. From this source a painstaking selection was carried out to come up with 227 ventures that fall into the category of small enterprises. The scope of the sample elements was based on the number of employees which is 11- 50, the age which is 42 months and the turnover as defined in the schedule in chapter two.

Another source namely Bordei-Kei Chamber of Business (2009) put the overall figure of its affiliates falling within the scope of this study at 322. A careful scrutiny of these two data bases revealed that some ventures appeared in both sources. The decision to come up with a population to work with was arrived at by adding those that appear in Bordei-Kei but do not appear in the Directory to the 227 from the Enterprise Directory. The additional number was 134 which when added to 227, gave an approximate population of 361.

Sampling Approach

A sample frame is a list of elements from which the sample may be drawn (Zikmund, 2003). The sample frame used in this study is that of registered new small ventures as reflected above. It includes only those enterprises that have between 11 and 50 employees and have been in existence for less than 42 months. There are several alternative ways of taking a sample. The major alternative sampling plans may be grouped into probability and non-probability techniques (Cant *et al.* 2005). In probability sampling, every element in the population has a known non-zero probability of selection. The simple random sample is the best known probability sample, in which each member of the population has an equal probability of being selected. In probability sampling the probability of any particular member of the population being selected is by chance. All elements do not have the same chance of being selected but the probability of selection of each element can be specified (Cant *et al.* 2005). This study used the non-probability sampling technique which relies on the personal judgment of the researcher. The researcher decided on the elements to include in the research. Raosoft Sample Size calculator was used to determine the sample size taking into consideration the population size, the margin of error and the confidence level. It is in light of these considerations, that Raosoft provided a sample size of 187.

Data collection method

Cant *et al* (2005) note that the broad area of survey research encompasses any measurement procedures that involve asking questions to respondents. A survey will ask a series of questions that require answers from respondents and the answers are then analysed at the end of the survey when the participant level has been reached. This study used the survey method to gather data through self-administered questionnaires. Self-administered questionnaires are research questionnaires personally delivered to the respondent by the interviewer but completed by a respondent with no interviewer involvement (Cooper & Schindler, 2003). The researcher used the self-administered questionnaire for the following reasons:

- Self-administered questions ensure anonymity and privacy of the respondents, thereby encouraging more candid and honest responses.
- Self-administered questionnaires have proved to have a higher response rate than other data gathering techniques such as mail surveys.
- Self-administered questionnaires are less expensive than other data gathering methods such as personal interviews where the researcher must be present with respondents at all times (Cooper & Schindler, 2003).

Data Analysis

Data analysis usually involves the reduction of accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques. It also includes interpretation of research findings in the light of research questions, and determines if the results are consistent with the research hypotheses and theories (Cooper & Schindler, 2003). The purpose of analytic methods is to convert data into information needed to make decisions. The choice of the methods of statistical analysis depends on (1) the type of questions to answered (2) the number of variables, and (3) the scale of measurement. Data analysis for this study included descriptive statistics principal component analysis and varimax rotation to rank and reduce the variables to a cluster.

RESULTS AND DISCUSSIONS

Thirty variables were identified from the results of the survey to be the barriers faced by new small ventures to achieve growth. The principal component analysis with varimax rotation was used to reduce the variables to five clusters. The objectives of the study were to evaluate the internal and external environmental factors that stand as barriers to the growth

of new small ventures in South Africa. Following is the analysis of the results and the discussion revealing the barriers and their order of severity according to the principal component analysis.

According to Allison (2001) a missing value may represent or is a product of an unknown value. There were only three cases of missing values and pairwise deletion method under SPSS was used. This study used the Kolmogorov-Smirnov test to determine the normality of the data because the sample size was more than 100. The normality of the data could be assumed because the significance value was greater than .05.

Table 2 depicts the mean ranking of obstacles perceived by new ventures as inhibiting their growth. The results of Table 2 show that variables related to finance, crime and markets are highly ranked by new small ventures as growth inhibitors. Variables related to infrastructures such as poor roads, poor water supply and poor telecommunications are lowly ranked as growth inhibitors.

Table 2: Mean ranking of perceived barriers to the growth of new ventures

Rank	Perceived obstacle	Mean	Standard Deviation	Skewness	Kurtosis
1.	Lack of access to finance	4.78	1.66	.126	.250
2.	Lack of collateral	4.52	1.94	.182	.432
3.	Insufficient owners equity contribution	4.37	1.67	.111	.134
4.	Crime	4.35	1.91	.184	.385
5.	Insufficient government support	4.24	1.81	.156	.543
6.	High interest rate	4.20	1.69	.201	.333
7.	Inadequate demand	4.15	1.96	.232	.182
8.	Inadequate market research	4.15	1.67	.177	.216
9.	Location of the business	4.13	1.67	.401	.129
10.	High competition	4.12	1.91	.189	.331
11.	Bad credit record	3.75	1.83	.307	.121
12.	High production costs	3.47	1.89	.540	.165
13.	Lack of information technology	3.41	1.63	.344	.211
14.	High transport costs	3.39	1.63	.620	.207
15.	High taxes and other tariffs	3.20	1.58	.442	.201
16.	Recession in the economy	3.09	1.63	.234	.500
17.	Lack of experience relevant to	3.02	1.58	.267	.305

	the venture				
18	Founder not familiar with market/industry	2.94	1.63	.178	.461
19	Lack of networking	2.76	.56	.286	.295
20	Lack of business skills	2.76	1.27	.180	.265
21	Shortage of skilled labour	2.68	1.89	.199	.146
22	Costs of registration and licenses	2.21	1.77	.231	.103
23	High inflation rate	2.07	1.93	.204	.152
24	High foreign exchange rate	2.01	1.68	.109	.327
25	Poor electricity supply	2.01	.67	.25	.213
26	Lack of training	1.78	.60	.272	.140
27	Corruption	1.77	1.25	.280	.147
28	Poor roads	1.75	1.32	.136	.100
29	Poor water supply	1.42	.75	.182	.333
30	Poor telecommunication	1.40	1.49	.441	.393

Source: Data analysis for the study

Principal Component Analysis

The large number of internal and external variables related to the barriers to the growth of new ventures made data analysis more difficult and complicated. The principal component analysis is often used to overcome this obstacle by grouping together variables that are highly correlated into principal components and, as a result, bring a simplification to analysis. According to Leech, Barrett and Morgan (2005:79) the principal components analysis is a data reduction technique used to reduce a large number of variables to a smaller set of underlying factors that summarise the essential information contained in the variables. The decision about which principal components to retain depends on the percentage of the variance accounted for the variable, the absolute variance accounted for by each principal component (PC), and whether the component can be meaningfully interpreted. Varimax rotation was used to transform the components into factors that were more clearly interpretable. To facilitate an easier interpretation of principal components, factor rotation methods were developed. This research study uses varimax orthogonal rotation method developed by Kaiser (1958). Principal components with eigenvalues greater than one are usually retained. According to Leech et al. (2005:80) the assumptions for principal component analysis include:

- Sample size: A sample of 100 subjects is acceptable;
- Normality: Principal component analysis is robust to the assumption of normality. The normality of the data was assumed by using the Kolmogorov-Smirnov test (significance value was greater than 0.05)
- Sampling adequacy: Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure the sampling adequacy and can be used to determine the factorability of the matrix as a whole. If Bartlett's test of sphericity is large and significant, and if the KMO is greater than .6, then factorability is assumed. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is an index used to examine the appropriateness of factor analysis. High values (between 0.5 and 1.0) indicate factor analysis is appropriate (Leech, et al 2005).

Table 3: KMO and Bartlett's test for the barriers to the growth of new small ventures

Kaiser-Meyer-Olkin measure of sampling adequacy (KMO)		0.780
Bartlett's test of sphericity	Approx. chi-square	
Df		498.065
Sign.		231
		0.000

Source: Data analysis for the study

To ensure the use of principal component analysis, the Bartlett Test of Sphericity (BTS) and Kaiser-Meyer-Olkin (KMO) test of appropriateness were carried out accordingly (refer to table 3). The results (the BTS at 498.065 and the level of significance at $P=0.000$) indicated that the data were appropriate for the purpose of principal component analysis. The result of the KMO measure of sampling adequacy was 0.780 which indicates that there are sufficient items for each factor. The two tests support the appropriateness of the principal component analysis technique.

Table 4: Total variance explained

Component	Initial Eigenvalues	Extraction sums of squared loading	Rotation Sums of Squared Loadings
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	Total	% of Variance	Cumulative %	Total	% of variance	Cumulative	Total	% of Variance	Cumulative %
1	20.225	45.966	45.966	20.225	45.966	45.966	12.142	24.784	27.596
2	8.432	19.164	65.129	8.432	19.164	65.129	8.759	19.907	47.503
3	2.356	5.355	70.485	2.356	5.355	70.485	6.126	13.923	61.426
4	2.156	4.900	75.385	2.156	4.900	75.385	4.566	10.377	71.803
5	1.835	4.171	79.556	1.835	4.171	79.556	2.989	6.753	78.556
7	.895	1.688	84.230						
8	.779	1.498	85.728						
9	.701	1.323	87.051						
10	.653	1.232	88.283						
11	.601	1.134	89.417						
12	.552	1.041	90.458						
13	.492	0.928	91.386						
14	.452	0.853	92.239						
15	.401	0.757	92.996						
16	.369	0.696	93.692						
17	.301	0.568	94.260						
18	.215	0.406	94.666						
19	.198	0.373	95.039						

20	.182	0.343	95.382						
21	.173	0.326	97.708						
22	.167	0.313	97.021						
23	.161	0.304	96.325						
24	.157	0.297	97.167						
25	.152	0.287	98.612						
26	.107	0.186	98.996						
27	.101	0.165	99.107						
28	3.988E .02	7.401E .02	99.364						
29	3.652E .02	7.111E .02	99.651						
30	3.397E .02	6.543E .02	100.00						

Extraction Method: Principal Component Analysis

Table 4 shows that five components with Eigenvalues greater than one account for 79.556% of the total variance. According to the rules of principal component analysis only factors that have Eigenvalues greater than one should be retained.

Table 5 Rotated Component Matrices

Component	1	2	3	4	5
Lack of access to finance	.920				
Lack of collateral	.901				
Crime	.877				
Lack of owners equity contribution	.651				
Bad credit record	.606				

Insufficient government support	.601				
High production costs	.581				
Inadequate market research	.565				
Lack of information technology	.543				
Corruption	.523				
High interest rate		.917			
High taxes and other tariffs		.872			
Recession in the economy		.834			
High inflation rate		.822			
High exchange rate		.752			
Location of the business		.652			
Inadequate demand			.822		
High competition			.745		
High transport cost			.695		
Inadequate market research			.667		
Lack of experience relevant to the venture				.865	
Founder is not familiar with the market/industry				.832	
Lack of networking				.801	
Lack of business skills				.638	
Shortage of skilled labour					
Lack of training relevant to the venture				.514	
Poor electricity supply					.779
Lack of personal transport					.625

Poor roads					.514
Poor water supply					.494
Poor telecommunication					.437
Cronbach's Alpha	.817	.804	.734	.797	.758

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation

According to Table 4 the first component has an Eigenvalue of 20.225 and percentage of variance of 45.966%. The component consists of ten items. The items included in this component include lack of access to finance (.920, Table 5). This is the item with the highest factor loading. Other items include lack of collateral .901; crime, .877, lack of owners equity contribution .651; bad credit record .606; insufficient government support, .601, inadequate market research,.589, high production costs. 581 and corruption, 563. Cronbach's alpha for this component yielded a value of 0.817 indicating the reliability of the cluster. Component one is labelled "Financial". Financial component is largely internal to the business. Although crime and corruption are external factors, however, the negative effects of crime such as increased costs of security, replacement and repair costs impact internally on the finances of the business. Furthermore, incidences of crime can affect the sales of a firm which results with negative impact on finance.

The second component (table 4) has an Eigenvalue of 8.432 and percentage of variance of 19.164%. The component consists of six items. These items are: high interest rate (0.917), high taxes (0.872), and recession in the economy (0.834); high inflation rate .822 and high exchange rate. Cronbach's alpha for this component yielded a value of 0.804 indicating the reliability of the cluster. This component is labelled "Economic". The cluster is external, systemic and largely uncontrollable by new ventures. The third component has an Eigen value of 2.356 and % variance of 5.355%. This component consists of four items. Inadequate demand, location of the business high competition and high transport costs. Cronbach's alpha for this component yielded a value of 0.734 indicating the reliability of the cluster. The component is labelled as "Market". The component is largely external to the firm.

The fourth component has an Eigenvalue of 2.156 and % of variance 4.9%. This component consists of five items and is largely internal to the firm. The component includes lack of

experience with the highest factor loading of .865. Other items in the component include founder is not familiar with market/industry (.832), lack of networking .811; lack of business skills .638, shortage of skilled labour and lack of training, .514.. Cronbach’s alpha for this component yielded a value of 0.797 indicating the reliability of the cluster. The component is labelled “Management”. The fifth component with eigenvalue of 1.835 accounts for a variance of 4.171%. This component consists of five items. The items are; poor electricity supply .779, lack of personal transport .625, poor roads. 514, poor water supply .494 and poor telecommunication .437. Cronbach’s alpha for this component yielded a value of 0.758 indicating the reliability of the component. The component is labelled “Infrastructure” are largely external to a firm.

Table 6: Comparison of components

Component	Internal/external
Financial	Internal
Economic	External
Market	External
Management	Internal
Infrastructure	External

Table 6 shows that the most important barrier to the growth of new ventures is finance which is an internal factor. This is followed by economic and market which are external factors. Another internal factor which is a barrier to the growth of new ventures is management. The least important factor is infrastructure which is an external component which is not only reflected in Table 6 above but has been revealed by the eigenvalue of 1.835 accounting for a variance of 4.171% (Table 4).

Managerial implications

The results of this study help current research to establish in an empirical manner the major constraints that face new small ventures to achieve growth in order of their severity. From the results, a ranking order of the constraints is clearly established which puts finance at the top of the cluster. Other studies have not been as conclusive about the order of severity as has been revealed by this study.

In order to overcome environmental challenges that constrain small ventures from achieving growth, the following recommendations are suggested: New ventures should be able to produce business plans that forecast cash flow requirements, have an operational plan and demonstrate viability and sustainability in order to secure debt finance. Government support agencies that can help new ventures with finance and training such as SEDA should be rigorously marketed to create awareness. Concessional loans for small ventures should have low interest rates in order to ease the loan burden on the emerging ventures. Thorough market research is needed to ensure that there is adequate demand for the products or services being offered by emerging enterprises. Strategic planning to determine the nature of competition and how to position the business is needed. Choice of the business location needs to be considered carefully in order to minimise distribution costs, meet demand and beat competition. There is also need to choose the product or service that appeals to customers in order to fully satisfy customer needs. Good customer care and efficient service are the hallmark of customer retention. Pricing decisions have to be considered carefully in order to beat competition as well as achieve lucrative profit margins. Provide up-to-date training programmes that focus on the needs of entrepreneurs rather than outdated programmes that cater predominantly for general managers. Entrepreneurial trainers and consultants must themselves be well-trained and/or experienced in the specific area of expertise that they offer, for example accounting, HR or logistics. It is important to include technology in the school curricula as well as adult education programmes to ensure that the wider population becomes more familiar with technology. It is beneficial to the growth and sustenance of new ventures to have reforms in the regulatory environment in order to reduce red tape and lengthy procedures in the registration of new businesses. Crime and corruption in both the public sector and the business community need to be dealt with decisively. Tax incentives need to be put in place to favour new venture creation and development. Inflation targeting and interest rates reviews should consider the new enterprises. Transport and communication facilities as well as reliable power must be provided in rural and urban areas. Liberalisation of the telecommunications sector to allow for increased competition is vital to assist in bringing down the cost of telecommunication.

LIMITATIONS AND AREAS FOR FURTHER STUDY

The study however has the following limitations: That the study is limited to new small ventures in the Eastern Cape Province only and hence the results cannot be taken to be fully representative of the whole of South Africa though they reflect a general trend. That some external factors, such as macroeconomic environment, socio-cultural environment,

geographic environment, and demographic environment that have some marked effects in the Eastern Cape might not have similar effects in some other provinces and vice versa.

CONCLUSION

Even though economic growth can be supported and sustained by the introduction of new enterprises, these new ventures face environmental factors which are either internal or external to the enterprises. Small ventures face financial, marketing, management and infrastructural factors that have a negative effect on their growth and survival. In order for the government of South Africa to overcome this challenge and help small enterprises achieve their intended task of economic development, deliberate policy on financial support schemes, education and training as well as infrastructural development have to be put in place. These include such schemes as Khula Enterprises as well as the need to ease lending terms by banks.

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**THE IMPACT OF THE BUSINESS ENVIRONMENT ON THE AVAILABILITY
OF TRADE CREDIT TO NEW SMEs IN SOUTH AFRICA**

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Keywords: New SMEs, trade credit, business environment

ABSTRACT

This study investigates the impact of the business environment on the availability of trade credit to new SMEs in South Africa. The literature identifies 52 questionnaire items. Exploratory factor analysis reduces the items 39 items under nine factors that include both internal factors and external factors. The internal factors were labelled as managerial competencies, collateral, networking and business information. The external factors were labelled legal, macro-economic, ethical perception, crime and corruption. Empirical research was conducted to investigate the impact of the nine factors on the availability of trade credit to new SMEs. The instrument used was the self-administered questionnaire. The statistical analyses included factor analysis, item analysis and Pearson correlation. The results show that both internal and the external factors significantly impact on the availability of trade credit to new SMEs.

KEYWORDS: New SMEs, trade credit, business environment

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Introduction

South Africa suffers from high unemployment with an official estimate of approximately 24.5% of the economically active population unemployed (Statistics South Africa, 2009). The country also suffers from high levels of poverty and income inequality. One of the best ways to address unemployment is to leverage the employment creation potential of small businesses and to promote small business development (FinMark Trust, 2006). Gree and Thurnik (2003:243) argue that the contribution of the SME sector cannot be sustained without the creation of new SMEs. According to Maas and Herrington (2006) a new SME can be described as an SME that has been in existence for less than forty two months. New SMEs are seen as a significant component of the solution to South Africa's development issues.

However, despite the noted contribution of new SMEs, the creation rate of new SMEs in South Africa is one of the lowest in the world. According to Herrington, Kew and Kew (2009) South Africa's Total Entrepreneurship Activity (TEA) at 7.8% is below the average rate (10.6%) of all the participating countries in the Global Entrepreneurship Monitor (GEM) survey. In addition, 75% of new SMEs created in South Africa fail within the first two years of operation (Von Broembsen, Wood & Herrington, 2005). Various challenges and impediments prevent the creation of new SMEs and as well cause the high failure rates of new SMEs in South Africa. One of these is the non availability of formal sector financing (Herrington et al. 2009).

Demirguc-Kunt, Maksimovic, Beck and Laeven (2006:933) point out that the two primary sources of external finance for new SMEs are equity and debt. External equity in the form of venture capital or the stock exchange is usually not available for new SMEs. The lack of external equity makes many new SMEs dependent on bank loans and trade credit for early-stage financing. FinMark Trust (2006) provides evidence that only 2% of new SMEs in South Africa are able to access bank loans and that the use of suppliers credit by new SMEs is virtually non-existent. Balkenhol and Evans-Klock (2002) put the use of trade credit by new SMEs in South Africa at 0.2%.

Previous studies on SMEs and access to finance in South Africa have completely ignored the impact of trade credit and have concentrated on bank loans. Wilson and Summers (2002:318) point out that studies of enterprise finance in Africa and elsewhere from the supply-side typically focus on bank credit, and more particularly on bank loans. Berger and Udell (2006:2949) note that although trade credit is extremely important to SMEs, it has

received much less interest than commercial bank lending which provides only slightly more credit to SMEs. Since only a limited number of new SMEs have access to loans from financial institutions, trade credit may often be the best or only available source of external funding for working capital. New SMEs may prefer trade credit financing during the early years when the risk of default is high. Also, trade credit is a substitute to bank credit for firms that are credit-rationed by banks. This suggests that trade credit could be one of the solutions to the credit constraints faced by new SMEs in South Africa. The question is why is it that trade credit is not available to new SMEs in South Africa?

The argument of this study is that there are certain factors in the internal and external environment (business environment) of new SMEs that prevent trade creditors from granting credit new SMEs. A detailed literature review on the business environment and trade creditors was undertaken. This resulted in the development of a 52-item questionnaire. Exploratory factor analysis of the responses resulted in the reduction of the 78 items to 39 items and nine underlying factors which are collateral, business information, managerial competencies and networking (internal factors). External factors included ethical perception, the legal system, the macro-economic environment, crime and corruption.

Problem investigated

What is the impact of the business environment (internal and external environments) on the availability of debt from trade creditors to new SMEs?

Providing answers to these research problems will assist in gaining a better understanding of how to improve the availability of debt finance to new SMEs in South Africa. Solving the problem of finance is important to improving the creation rate of new SMEs and reducing the failure rate of new SMEs in South Africa.

Research Objectives

The primary objective of the study is:

- To investigate the impact of the business environment on the availability of trade credit to new SMEs.

To primary objective will be achieved through the following secondary objectives.

- To investigate empirically the impact of internal environment on the availability of trade credit to new SMEs.

- To investigate empirically the impact on the external environment on the availability of trade credit to new SMEs.

Literature review

Trade credit theories

Huyghebaert (2006:307) points out that trade credit arises when a firm purchases goods and services for which payment is delayed. It is a spontaneous source of financing, as it arises from ordinary business transactions. Trade credit is usually extended for an intermediate period of thirty to sixty days at which point payment is due. If payment is not made on the date, financing charges are applied and trade credit becomes an alternative method of financing business expenses. According to Selima (2007:17), trade credit theories can be broadly classified into four main groups. These are market imperfection asymmetric information, transaction costs, price discrimination and finance. The asymmetric information theory occurs when sellers face uncertainty about their customers' creditworthiness and financial health. Because of asymmetric information sellers cannot reliably make the best selling decisions.

Frank and Maksimovic (2004) point out that another theory of trade credit is the transaction costs theory. The combination of the supply of both goods and finance from one source can lead to cost advantages and to a reduction in transaction costs. Furthermore, when the transactions take place on credit, the timing of the payment is less uncertain which enables firms to improve their cash-flow forecasts and simplify cash management. Selima (2007:17) discusses the price discrimination theory of trade credit and points out that as demand for a product can vary, sellers can manipulate the product price through the variation of the credit terms offered to each separate customer. So varying the trade credit terms gives the seller a more flexible approach to pricing and to discriminate among customers, as it is much easier to adjust credit terms (based on the payment period) than product price in order to respond to fluctuating demand.

Frank and Maksimovic (2004) point out that another theory of trade credit is the financing theory. When non-financial institutions offer credit, they play an intermediary role by obviating the need for buyers to obtain finance from their banks to pay for their purchases. Furthermore, customers that are rationed by financial institutions tend to turn to trade credit, considering it a cheap way of getting short-term funds. So suppliers that are financially sound and can relatively easily get access to external funds tend to play this intermediary

role by financing their customers' stock through trade credit. Therefore, trade credit becomes an attractive way of obtaining required finance. The financing theory is the most applicable to the availability of trade credit to new SMEs.

Business environment

Smit, Cronje, Brevis and Vrba (2007:62) define a business environment as all those factors or variables, both inside and outside the organization that may influence the continued and successful existence of the organization.

Internal environment

The internal environment includes the factors that are largely controllable by the firm. In the capital structure context, the internal environment consists of factors largely controllable by the firm but which can influence its access to debt and or equity (Barbosa & Moraes, 2004). The internal environmental factors focused on by this study as identified by exploratory factor analysis are collateral, business information, managerial competencies and networking and collateral. Kitindi, Magembe and Sethibe (2007:55) find that trade creditors use business information provided by firms to analyse their present performance and predict future performance. Financial information reduces information asymmetry. If an entrepreneur has spent time developing a comprehensive and a priory business plan at an early stage in the project, risk perception should be reduced and the likelihood of obtaining capital should increase (Bollingtoft, Ulhoi, Madsen & Neergaard (2003:536). This suggests that the availability of quality financial information and owners' capital contribution positively associate with the availability of trade credit.

Studies by Shane and Stuart (2002:156) and Rudez and Mihalic (2007:191) positively associate managerial competencies with new venture performance. The higher the level of managerial competency exhibited by the owners of a new firm, the greater the viability and survival of the new SME. This suggests that credit providers may be willing to extend facilities to new SMEs whose owners exhibit a high level of managerial competencies. Coulthard and Loos (2007) describe networking in a small firm context as an activity in which entrepreneurially oriented SME owners build and manage personal relationships with particular individuals in their surroundings. Okten and Osili (2004:1225) examine the impact of network formation on SME growth. The results indicated that the formation of networks

helps new SMEs to tap resources in external environment successfully. This suggests that networking can improve the availability of trade credit to new SMEs.

According to Coco (2000:197) collateral helps reduce informational asymmetries and moral hazard problems that arise when between trade creditors and entrepreneurs. Trade creditors seldom take collateral. Willacy (2009) points out that if the customer fails to meet the trade creditor's credit criteria, the trade creditor will require the customer to provide security.

External environment

External factors are largely uncontrollable by SMEs and lenders. External factors are not only outside the reach of lenders' actions, but neither can they be changed in the short-run by policy makers (Beck, 2007). External factors focused on by this study include the macroeconomic environment, the legal environment, ethics, crime and corruption. Economic variables can affect the availability of trade credit to SMEs. Weak economic conditions can affect sales, revenues, market and growth potential of new SMEs. Weak economic conditions make it difficult for firms to use debt positively and this may affect their ability to repay debt (Barbosa & Moraes, 2004). The Organisation of Economic Cooperation and Development (2006) shows that market imperfections such as those caused by inefficient legal systems can constrain the ability of firms to access external finance. Firms in countries with more efficient legal systems should therefore obtain more external financing than firms in countries with less developed financial institutions. The World Bank Country Report on South Africa (2003) reveals a relatively inefficient legal system compared to developed countries. There is a shortage of judges and magistrates, backlog of cases and lower creditor protection. This suggests that the inefficient legal system in South Africa could have an impact on the availability of trade credit to new SMEs in South Africa.

Lepoutre and Heene (2006:259) find that new SMEs experience more difficulties than their larger counterparts when engaging in ethically responsible behaviour. The single most unethical practice by small firm professionals is dishonesty in making and keeping contracts. Creditors risk perception may be influenced by the extent to which they can assess that they can trust the entrepreneur or entrepreneurial team. Crime and corruption in South Africa are high and widely believed to restrain investment. The World Bank (2008) Investment Climate Survey finds that 30% of enterprises in South Africa rate crime as a major or very severe constraint on investment, putting crime amongst among the four most frequently mentioned constraints. The costs of crime to businesses in South Africa are substantial. Furthermore, the rate of corruption in South Africa is relatively high compared to developed countries

(Transparency International, 2008). Crime and corruption may affect repayment of trade credit.

Research methodology

The study used the quantitative research design and survey research method. Data for the research study was gathered through self-administered questionnaires in 2009. Seven-point Likert scale questions (1 indicating strongly disagree and 7 indicating strongly agree) were used except for demographic questions. The questions were asked negatively (e.g. lack of collateral causes non-availability of trade credit). The researcher focused on trade creditors in the wholesale, retail and manufacturing sectors. According to Selima (2007:17) these three sectors account for most of the trade credits. The population frame of trade creditors was obtained from the Border-Kei Chamber of Commerce, the Port Elizabeth Regional Chamber of commerce and the Enterprise Black Business Directory 2008. The population of big firms and SMEs that are in the wholesale, retail and manufacturing was five hundred and forty one. Using the Raosoft sample size calculator at 5% margin of error and 95% confidence interval the sample size for trade creditors was 225. This is the minimum recommended sample size by the Raosoft sample size calculator. However, 315 questionnaires were distributed to trade creditors.

The empirical research for the study was conducted in two ways; a pilot study and the main survey. The measuring instrument was designed to measure the internal and external environmental variables (the business environment) that impact on the availability of trade credit to new SMEs. For this purpose an initial 52-item questionnaire was designed. The questionnaire was administered to 101 respondents in a pilot study. Exploratory factor analysis of the responses allowed for content validity using the Cronbach's alpha and resulted in the reduction of the 52 items to 39 items and nine underlying factors

Exploratory factor analysis (EFA) is used to uncover the underlying structure of a relatively large set of variables. Leech, Barrett and Morgan (2005:82) point out that items with factor loading of less than 0.3000 can be removed. The conditions for factor analysis include: Factors with Eigenvalues greater than one are usually retained. Sampling adequacy: Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure the sampling adequacy and can be used to determine the factorability of the matrix as a whole. (Leech et al. 2005:82).

Results and findings

Table 1 here.

Table 1 depicts the results of the BTS and KMO. The results (the BTS at 557.161 and the level of significance at $P=0.000$) indicated that the data were appropriate for the purpose of factor analysis. The result of the KMO measure of sampling adequacy was 0.812 which indicates that there are sufficient items for each factor. The two tests support the appropriateness of the factor analysis technique.

Table 2 shows that nine factors with Eigenvalues greater than one account for 75.3% of the total variance. According to the rules of factor analysis only factors that have Eigenvalues greater than one should be retained.

Table 2 here.

Factor one was labelled as *business information*. The Eigenvalue for the factor is 10.225. This factor is internal to the firm. Factor two was labelled *networking*. The Eigenvalue for the factor is 6.441. The factor is internal to the firm. Factor three was labelled *crime*. The Eigenvalue for the factor is 4.104. The factor is largely internal to the firm. Factor four was labelled as *ethical perception*. The Eigenvalue for the factor is 3.276. The factor is external to a firm. The factor is largely internal to the firm. Factor five was labelled as *managerial competencies*. The Eigenvalue for the factor is 3.015. The factor is internal to the firm. Factor 6 was *legal system*. The Eigenvalue for the factor is 2.284. The factor is external to a firm. Factor seven was labelled *macro-economy*. The Eigenvalue for the factor 2.015. The factor is largely external to the firm. Factor eight was labelled *collateral*. The Eigenvalue for the factor is 1.846. The factor is internal to the firm. Factor nine was labelled *corruption*. The Eigenvalue for the factor is 1.424. The factor is external to a firm. All the factors have Cronbach's alphas greater than 0.7 indicating the reliability of the factors.

In the main survey, 315 questionnaires were distributed and 233 returned. The response rate was 74%. Most respondents are in the 31-40 age group. Males dominate. Most of the respondents were well educated with diplomas and degrees with about 6-10 years experience. In addition, the respondents' firms are predominantly independent, medium-size businesses in the manufacturing sector. Confirmatory factor analysis confirmed the nine factors.

Table 3 depicts the item analysis which included the means, standard deviation, skewness and kurtosis and the Cronbach's alphas. The Kolmogorov-Smirnov test was above 0.05 which indicated the normality of the data.

Table 3 here.

The results as indicated by the means show that the following variables have scale means above four out of seven (seven point Likert scale was used). Business information has the highest scale mean of 6.03, followed by networking 5.97, crime 5.67, ethical perception, 5.54, managerial competency 5.38, legal 5.19, macro-economy 4.80, collateral 2.83 and corruption 2.76. The results indicate that three of the four internal factors and four of the five external factors positively impact on the availability of trade credit to new SMEs. The significance of the findings was confirmed by the Pearson correlation test.

Tables 4 here

The Pearson correlation was used to test for the direction and strength of relationship between the business environmental factors and availability of trade credit. The results indicate that business information ($r=.938$, sig.0.01), networking ($r=.889$, sig. 0.01), crime ($r=.860$, sig 0.02), ethical perception ($r=.732$; sig 0.03), managerial competency ($r=.668$; sig 0.01), legal ($r=.657$; sig 0.01) and macro-economy ($r=.622$; sig 0.03) all have strong significant positive relationships with availability of trade credit. Collateral ($r= .191$, sig. 0.26) and corruption ($r= .117$, sig. 0.18) have weak insignificant relationships with the availability of trade credit.

Conclusions and managerial implications

The results indicated that internal factors especially the availability of business information is the most important factors affecting the availability of trade credit to new SMEs. Other internal factors (managerial competency and networking) are very important. Out of the five external factors, four have positive and significant correlation with the availability of trade credit to new SMEs. The results suggest that variables in the internal environment and external environment are important with respect to the availability of trade credit.

To improve the availability of trade credit to new SMEs training and skill development need to be improved for new SMEs. Government agencies such as Small Enterprise Development Agency (SEDA) can organize training for new SMEs. Awareness should be created for the training programmes through advertisements in local and national media. Furthermore, a mentorship approach can be instituted by government agencies to help new SMEs. Training can be costly for new SMEs. Subsidies, matching contributions to training, tax credits for training or reimbursements for completed training can be used to reduce the cost of training

to new SMEs. There is the need to create a positive attitude toward entrepreneurship and training. Educational institutions should introduce and strengthen entrepreneurial education.

The study therefore strongly recommends that government, non-governmental organisations, and other local supporting agencies should organize network formation activities such as seminars, trade fairs. Reforming the legal framework for creditor rights and insolvency proceedings in general, and for secured lending in particular, would greatly enhance the ability of SMEs to access bank loans by pledging collateral. Specialized courts to act against SMEs that default on loan obligations could also facilitate SME finance. Government should work in partnership with organisations such as Business Against Crime South Africa and Business Unity South Africa. The literature review showed that poverty is one of the causes of crime. There is the need to create work opportunities for the vast number of the unemployed in South Africa. The legal system needs to be more efficient so that criminal cases against businesses can be dealt with quickly. More effective policing is needed, including better police visibility, area coverage and faster response times Business ethics should be introduced as a major module in the universities and colleges in South Africa to prepare likely entrepreneurs about the importance of ethics. SME owners should be trained on the importance of business ethics.

Limitations and areas for further study

The study focuses only on trade credit. Other providers of funds such as commercial banks and government agencies were not investigated. The study only focuses on the supply side of debt financing and the perception of providers of funds. A dyadic survey to examine the obstacles to credit as perceived by both trade creditors and SMEs could help to further confirm the findings of this study.

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Table1: KMO and BTS

Variables	Results
KMO	0.812
BTS	557.161
Sig.	0.02

Table 2: Rotated factor loading and Cronbach's alpha

Variables	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Cash flow does not show that the credit can be repaid	0.884								
The business is not viable	0.842								

The business does not have a business plan	0.810 0								
The business does not have market potential	0.611 6								
The business does not have growth potential	0.571 1								
The business does not have suitable business premises	0.534 2								
The business plan is not through in its coverage of key issues	0.478 2								
The business plan does not do an excellent job in articulating opportunity	0.450 0								
Business plan not produced by an accountant	0.211 6								

High competition	0.1996								
The product is new	0.1179								
The technology is new	0.1110								
No prior relationship		0.7352							
Short prior relationship		0.6975							
Lack of good reference on integrity		0.6662							
No distribution of output agreement		0.5986							
The business does not belong to a professional association		0.6530							
No social relationship		0.1971							
The business is not insured against crime			0.8100						
The business is located in high crime			0.7654						

area									
Collateral is located in high crime area			0.1775						
Collateral is not insured against crime			0.1003						
Perception of payment default				0.7895					
Perception of dishonesty in keeping commitments				0.6988					
Perception of willingness to divert funds to non-core activities				0.6760					
Perception of false information and paddling of financial statements				0.6531					
Bad credit record					0.7880				
Lack of experience relevant to the venture					0.7651				

The entrepreneur does not have the resources to manage the business					0.6558				
Lack of education					0.6110				
Lack of business skills					0.4331				
Lack of documents					0.4116				
Founder lacks demonstrated managerial ability					0.2739				
Founder has not received any training related to the business					0.1622				
In the situation of legal action against the customer, it is costly to get judgment						0.8010			
In the situation						0.763			

of legal action against the customer, it takes a long time to get judgment						2			
Court are not fair and impartial Court decisions are not enforced						0.678 3			
In the situation that legal action is taken against customers to recover loan, the perception that corruption of court official may delay judgment						0.598 4			
Weak confidence in the legal system to enforce contracts and property rights						0.486 1			

Recession in the economy							0.6920		
High interest rate							0.6543		
High inflation rate							0.2006		
High unemployment rate							0.1661		
Low business confidence							0.1224		
Continuous fall in the value of real estate							0.1004		
Low equity contribution								0.6980	
No guarantee								0.5987	
No current asset as collateral								0.4821	
No fixed asset as collateral								0.3885	
In the situation where the credit application is for									0.7543

government contract, the perception that the corruption of government official may delay payment									
In the situation where the credit application is for private contract, the perception that corruption may delay payment									0.6988
Eigenvalue	10.225	6.441	4.104	3.276	3.015	2.284	2.015	1.846	1.424
Cronbach's alpha	0.8210	0.7654	0.7865	0.8523	0.7119	0.7432	0.7608	0.8107	0.7112

Table 3: Item analysis

	Collateral	Business information	Management Competencies	Macro-economy	Crime	Network	Legal	Ethical perception	Corruption
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Mean	2.83	6.03	5.38	4.80	5.67	5.97	5.19	5.54	2.76
Standard deviation	0.217	0.186	0.541	0.597	0.117	0.318	0.459	0.221	0.117
Cronbach's alpha	0.7257	0.8113	0.7210	0.7507	0.8002	0.7573	0.7103	0.7524	0.7290
Skewness	0.549	0.201	0.616	0.791	0.147	0.323	0.111	0.417	0.315
Kurtosis	0.318	0.125	0.497	0.316	0.593	0.216	0.149	0.114	0.347
Kolmogorov-Smirnov	0.71	0.62	0.75	0.49	0.17	0.26	0.58	0.41	0.57

P value significant at 0.05

Table 4: Correlation results

Factor	Results	
	R	P-value
Collateral	.191	0.26
Business information	.938	0.01
Managerial competency	.668	0.01

Crime	.860	0.02
Macro-economy	.662	0.03
Networking	.889	0.01
Ethical perception	.732	0.03
Legal	.657	0.01
Corruption	.117	0.18

Sig. 0.05 (2-tailed)

DEBT AND SOLVENCY OF SMEs IN SOUTH AFRICA

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ABSTRACT

DEBT AND SOLVENCY OF SMEs IN SOUTH AFRICA

This research investigates the impact of the usage of debt on the solvency of SMEs in the manufacturing sector in the Buffalo City Municipality. To achieve this objective, the research hypothesized that SMEs have a difficulty accessing debt finance from financial institutions and also that the usage of debt has a negative impact on the solvency of SMEs. This study is important because SMEs, despite their contributions to the South African economy, have not been given due attention as research on corporate finance has been biased towards large firms. The results indicated that SMEs have a difficulty accessing debt finance and that SMEs that use debt are not insolvent. Lastly, the study recommended that small manufacturing firms, commercial banks and the South African government take certain measures. These measures are expected to improve the accessibility to debt and reduce the cost of debt to SMEs.

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1 Introduction

The failure rate of SMEs in South Africa is very high. About 75% of SMEs become insolvent within the first five years of operation. One of the primary reasons for the high failure rate of SMEs is the high cost of debt finance occasioned by the high interest rate (Berry, Von Blottnitz, Cassim, Kesper, Rajaratnam & Von Seventer, 2002). According to Coleman and Cohn (2001) debt is one of the variables that can cause the insolvency of SMEs. Most of the empirical studies such as Coleman and Cohn (2001) and Eriotis, Franguoli and Neokosmides (2002) regarding the impact of debt on the solvency of firms have focused primarily on large firms in developed countries. Few studies, such as Tze-Wei Fu, Mei-Chu-Ke and Yen-Sheng- Haung (2002) have been conducted on smaller firms in developing countries or emerging markets such as South Africa. Rajan and Zingales (1995) however, argue that studies done in developed countries, alone, cannot be completely used to substantiate theories on corporate finance. Studies carried out in developing countries are also very important and may reach different conclusions from those carried out in developed countries. This is because the financial systems of developed countries are relatively more efficient than those of developing countries. The reason for this is that most developed countries, unlike developing countries, have capital markets which have been in existence for a long time and are, therefore, well developed. Furthermore, interest rates are generally much lower in developed countries compared to developing countries. Therefore, without testing for the robustness of these findings outside the environment in which they were uncovered, it is hard to determine whether these empirical regularities are merely spurious correlations or whether they support one theory or the other.

Similarly, SMEs despite their importance in an economy have not received the attention they deserve. According to Ntsika (2002) SMEs in South Africa contribute 56% of private sector employment and 36% of the gross domestic product. Barbosa and Moraes (2004) suggest that one of the reasons why SMEs have not been thoroughly studied is that they have always posted methodological difficulties in research. SMEs are not obliged to prepare or publish annual financial statements that can be used to analyse their performance. Conversely, large firms are usually compelled by law to publish annual financial statements. In addition, data on the performance of large firms (especially listed firms) can easily be obtained on the stock exchanges or from credit rating agencies, although this is not the case with small firms. Such a lack of easily available data makes small firms difficult to study. Rajan and Zingales (1995) indicate that although the study of the capital structures of listed and large firms may be of the greatest importance to the financial community, the interests of academics are broader. Academics are interested in studying the whole universe of firms

and not just large firms. Furthermore, there is no certainty that research on SMEs will reach the same conclusions as those on large firms, in view of the major differences between the two types of business organisations. A study by Schoombee (1998) reveals that SMEs are relatively riskier and more likely to fail than large firms. SMEs have lower access to capital markets and therefore pay higher costs for capital than large firms. Consequently, corporate finance theories which apply to large firms may not necessarily hold for SMEs. The primary objectives of this study are twofold: The first objective is to investigate if SMEs in South Africa have access to debt finance. The second objective of the study is to investigate the impact of the usage of debt finance on the solvency of SMEs.

2 Theoretical framework

Modigliani and Miller (1958) argue that the capital structure is irrelevant to the value of the firm in a perfect, frictionless world without taxes. The capital structure is the mix of debt and equity financing which a firm uses to finance its operations. However, the perfect world without taxes is unrealistic and this led to the revision of Modigliani & Miller's 1958 argument in 1963 with the introduction of taxes. Modigliani and Miller (1963) argue that interest payments on debt are tax-deductible whereas dividend payments on equity do not enjoy such tax advantages. Therefore, in a world of tax-deductible interest payments, firms can use debt to lower their costs of capital and maximise their profitability. The tax advantage of debt makes it cheaper than equity. The mix of cheap debt with relatively expensive equity reduces a firm's cost of capital, which is the cut-off rate for investment acceptance decisions. This is known as the leverage effect of debt, and refers to the use of debt capital to minimise a firm's cost of capital and maximise its profitability. Leverage (financial leverage as distinct from operational leverage) is described as the level of debt a firm uses in its capital structure. Leverage creates a return on equity that is higher than if the business had no debt. However, leverage also introduces an element of financial risk to the firm. Financial risk is described as the risk placed on ordinary shareholders of a firm as a result of the use of debt. Financial risk stems from the obligation to make interest and principal payments on debt irrespective of the financial performance of the firm (Brealey, Myers & Marcus, 1995). Modigliani and Miller (1963) suggest that debt can be used to improve the profitability of firms. However, the use of debt can also increase the financial risk of a firm. This suggests that debt can lead to the insolvency of firms.

3 Access to debt finance by SMEs in South Africa

Leverage (debt) is particularly important to SMEs in South Africa as other sources of funds are relatively limited. Most small firms suffer from inadequate capitalisation as they cannot participate in the capital markets. Therefore, access to debt is of primary importance to

SMEs in order for them to contribute significantly to the South African economy (World Bank, 2000).

However, despite the importance of the small business sector, in South Africa, access to finance is a frequently cited problem. Sources of capital are more limited for SMEs compared to large firms. Therefore, unlike large, particularly publicly-listed firms, SMEs do not have the option of issuing shares or debentures in the capital market. Even if they are allowed to participate in the capital market, the high transaction costs associated with publicly issued debt and equity will be too expensive for them. Owing to their inability to access the public debt and equity markets, SMEs tend to be heavily reliant on commercial banks as a source of debt financing (Berry et al 2002).

Research by Berry et al. (2002), documents the reliance of SMEs on bank debt as a source of financing. These researchers, however, point out that access to bank debt is, paradoxically, a frequently cited challenge for SMEs. SMEs are often relatively new and lack a consistent track record of profitability that would demonstrate the capability to repay a loan. In addition, many SMEs lack assets that could be used as collateral. SMEs are also more prone to financial distress and failure. Commercial banks, because of these factors, consider lending to SMEs a high risk. Therefore, commercial banks often deny loans or offer loans to SMEs at higher rates of interest to accommodate the perceived high credit risk of SMEs (Coleman & Cohn, 2001).

The inaccessibility of debt finance to SMEs can further be attributed to information asymmetry. Information asymmetry arises when one party to a transaction has better information than the other. SMEs may have more information about their future prospects than the banks. Since banks do not have the necessary information, even small firms with profitable investment opportunities are turned down when requesting credit facilities. Banks, therefore, introduce restrictive covenants and also collect collateral from small firms to mitigate this problem (Bose & Cotheren, 1997).

Foxcroft, Wood, Herrington and Segal (2002) agree with the above point of view. They furthermore stipulate that an important dimension of relationship building is duration, since the longer the borrower has been servicing its loan, the more likely the business is viable and its owner trustworthy. Conditional on the past experience with the borrower, the lender expects the loan to be less risky, and this should reduce the expected cost of lending and increase the willingness to provide funds. An SME with close ties to its bank should, therefore, have greater accessibility to funds relative to a firm without such ties.

Berry et al (2002), however argue that in contrast to this scenario, recent evidence suggests that banks have increased their lending to small firms since 1996. The big four commercial banks in South Africa (ABSA, Standard Bank, Nedcor and First National Bank) currently have small firm units and products, which are exclusively, targeted at small firms. Therefore, the accessibility of small firms to debt capital from commercial banks might have improved. However, it is difficult to confirm this, because the major banks do not disclose statistics about lending to small firms in their books.

In addition, The World Bank (2000) and Falkena, Abedian, Von Blottnitz, Coovadia, Davel, Madungandaba, Masilela and Rees (2002) find that the majority of SMEs in South Africa are not severely, constrained by a lack of access to debt. Rather, when access to debt is an issue, it is related to size, age and the race of the owner. Furthermore, the constraint of access to debt becomes less binding as a firm grows older and larger. Conclusively, it seems that the issue of accessibility of debt capital to small firms still remains highly debatable. Studies by Driver, Wood, Herrington and Segal (2001) and Rogerson (2000) stipulate that SMEs in South Africa are challenged by access to debt capital. Other studies such as Berry et al (2002) and the World Bank (2000) find that access of debt finance to SMEs in South Africa, is not a constraint.

4 Debt and insolvency of SMEs in South Africa

SMEs may become technically and possibly legally insolvent as a result of the usage of debt. Brigham and Houston (1999) describe technical insolvency as the situation where a firm cannot meet its current obligations as they fall due (that is, the firm's current assets are lower than its current liabilities) even though its total assets may exceed its total liabilities. Legal insolvency occurs when a firm's total liabilities exceed a fair valuation of its total assets. This implies that the net worth of the firm is negative. Coleman and Cohn (2001) in a study on the use of leverage by small firms in the United States of America, point out that SMEs, because of their tendency to rely on debt capital, are also particularly susceptible to the problems of insolvency. Prior research on the impact of debt on the insolvency of firms in South Africa has focused mainly on large firms. Court and Radloff (1994) found that debt is one of the significant economic variables that can lead to the insolvency of large firms quoted on the Johannesburg Stock Exchange.

Kidane (2004) finds that in South Africa factors that can cause the insolvency of firms, apart from bad management, changes in technology and economic recession, is the excessive use of debt finance. Interest rates are relatively, high in South Africa compared to developed

countries. Thus, firms that are highly levered might be unable to meet loan commitments according to the contractual agreements they have with their banks. This could lead to their insolvency. Court and Radloff (1994) also agree that the use of debt is one of the significant economic variables that can lead to the insolvency of firms in South Africa.

The weak financial structure of firms as evidenced by their high and rising debt-equity ratio has been found to be their primary source of insolvency. Many firms cannot sustain this high debt ratio and, subsequently become insolvent. A high debt ratio, in itself, does not make a firm insolvent as long as the firm is earning enough to cover interest and principal payments. However, the more leveraged a firm is, the more vulnerable it is to bankruptcy. It is, therefore, the flow of earnings and thus the ability of the firm to make interest and principal payments that will determine whether the firm will, actually, become insolvent or not (Kim & Lee, 2002).

Traditionally, debt finance has been viewed as less expensive than equity. It furthermore has been used both to decrease the average cost of capital and enhance shareholders returns. However, there is a negative side to debt, since interest payments must be made regardless of market conditions. This vulnerability is an important factor that firms must consider when making capital structure decisions. In addition, there is a very strong economic and statistical link between macro-economic variables and a firm's ability to meet debt obligations. The macro-economic environment implies the level of aggregate demand, the level of interest rates, and the level of inflation. A positive macro-economic environment results in a rise in aggregate demand and positively impacts on the ability of a firm to meet debt obligations. The ability to service debt becomes problematic when the macro-economic environment deteriorates resulting in the insolvency of firms (Glen, 2004).

Rwelamila, Kupakuwana and Lobelo (2004) affirm that, during the early stages of starting a firm, many owners commit themselves to the use of debt, which might be one of the sources of finance available to them. The use of debt can be disastrous, as high interest rates and unfavourable repayment schedules are often overlooked due to the pressure of financing the firm. The annual interest rate on debt finance for SMEs can be as high as 17% in South Africa. Consequently, profit can only meet interest payments and the actual amount borrowed is paid off very slowly, leading to further interest charges. In a continuing cycle, the firm will soon reach a liquidity crisis and, subsequently insolvency. However, no empirical study has been conducted on whether debt finance leads to the insolvency of SMEs in South Africa.

Against this background, the study investigates whether SMEs in an emerging economy such as South Africa can use debt and still remain solvent in this era of high interest rates. Furthermore, SMEs often pay interest premiums and a host of non-interest fees such as application and other transaction fees when borrowing from commercial banks. The cause of this is that SMEs are considered a high credit risk compared to large firms. This high cost of funds because of increased risk increases the costs of debt for small firms. Consequently, the use of debt could lead to the technical and legal insolvency of SMEs. Consequently, it is hypothesised that:

H1 SMEs have difficulties accessing debt capital from commercial banks.

H2 The use of debt finance by SMEs leads to insolvency.

According to the Government Gazette of the Republic Of South Africa (2003) SMEs in the manufacturing sector can be defined as follows:

- Total full paid employees: Less than 50
- Total annual turnover: Less than thirteen million rand (R13.00m)
- Total gross asset value: Less than five million rand (R5.00m)

Furthermore, debt capital is limited to debt obtained by SMEs from commercial banks. Coleman and Cohn (2001) reveal that commercial banks are the most significant source of debt for SMEs, channeling more than three quarters of their requests.

5 Research methodology

The study covered SMEs in the Buffalo City Municipality of the Eastern Cape Province of South Africa. The Buffalo City Municipality consists of East London (including Mdantsane), King William's Town and Bhisho. The private sector economy of the municipality is dominated by manufacturing and agriculture. Manufacturing provides approximately 20% of formal employment in the area. The automotive industry, food processing, textiles and clothing are the major manufacturing activities in the municipality (Buffalo City Municipality, 2008). The study covered SMEs in the manufacturing sector. Manufacturing activity is, broadly, defined to include the manufacturing of the following products, namely; food products, beverages, wearing apparels, dressing and dyeing of fur, leather products, footwear, wood and wood products, paper and paper products, plastic products, non-metallic mineral products, basic metals, fabricated metal products, machinery and equipment, electrical machinery and apparatus, radio, television and communication equipment and furniture (Statistics South Africa, 2008).

Wheather and Cook (2000) describe the term survey population as the list of population elements from which the sample will be drawn. In practice, it is difficult to find complete lists or records of all of the elements in the survey population. This results in a sample drawn from lists which do not necessarily contain all of the elements. The survey population of two hundred and twenty six SMEs was obtained from the Small Enterprise Development Agency (SEDA) East London Office. Simple random sampling was used to choose pick one hundred and seventy six SMEs which represents 78% of the population. This is consistent with previous similar empirical studies. Data for the research study was gathered through self-administered questionnaires, which involved a direct and face-to-face meeting between the researcher and the respondent. One hundred and fifty two respondents completed the questionnaires. Reliability is concerned with consistency of measures. The level of an instrument's reliability is dependent on its ability to produce the same result when used repeatedly (Babbie & Monton, 2001). Reliability was ensured by pre-testing the research instrument in the survey development stage through a pilot study, by using a panel of experts to review the questionnaire for question phrasing and sequencing. Validity refers to whether an instrument actually measures what it is supposed to measure given the context in which it is applied (Babbie & Monton, 2001). Validity was ensured by using the Altman Z score (Multiple Discriminant Analysis) which is universally recognized as an insolvency predictor.

Altman (1983) introduced the Multiple Discriminant Analysis (MDA) to develop a predictive model for insolvency of firms with a high degree of accuracy. This technique, based on regression analysis, establishes coefficients for the ratios that minimise misclassification. A major reason for the high rate of financial distress of firms is attributed to the effect of heavy debt burdens. Using a sample of 66 manufacturing companies (33 failed and 33 successful), Altman's regression model achieved an accuracy of 95%. Altman argues that ratios, alone, cannot provide the complete story, and can be misleading when viewed in isolation. He therefore combined several ratios with statistical techniques to arrive at a single numeric score for the financial health of companies called the Z score. The Altman regression model that predicts the Z score for SMEs in the manufacturing sector is explained by the equation below

Equation 1: Altman Z score

$$Z = 0.717(X1) + 0.847(X2) + 3.107(X3) + 0.420(X4) + 0.998(X5)$$

Where: X1 = Working capital

$$X2 = \frac{\text{Retained earnings}}{\text{Total assets}}$$

$$X3 = \frac{\text{Earnings before interest and taxes}}{\text{Total assets}}$$

$$X4 = \frac{\text{Book value of equity}}{\text{Total assets}}$$

$$X5 = \frac{\text{Sales}}{\text{Total assets}}$$

Source: Adapted from Altman (1983).

Components of the equation

- X1 represents the ratio of working capital to total assets. This is the Z score which is considered to be a reasonable predictor of the increasing financial problem of a firm. A firm that experiences repeated losses usually suffers a reduction in working capital relative to its total assets;
- X2 represents the ratio of retained earnings to total assets. This is a Z score component that provides information on the extent to which a firm has been able to reinvest its earnings in itself;
- X3 represents the ratio of earnings before interest and taxes to total assets. The ratio adjusts for tax factors and, also, makes adjustments for leveraging due to borrowings. These adjustments allow more effective measurements of a firm's utilization of assets;
- X4 represents the ratio of book value of equity to total assets. This ratio provides an indicator of how much a firm's assets can decline in value before debt exceeds assets; and
- X5 represents the ratio of sales to total assets. This ratio measures the ability of a firm's assets to generate sales.

Interpretation of the Z scores

Altman (1983) stipulates that the analytical range of the Z score for the prediction of insolvency of SMEs in the manufacturing sector is as follows:

- Less than 1.23 (high probability of insolvency);
- 1.23 to 2.90 (gray zone where insolvency is difficult to predict); and
- Greater than 2.90 (low probability of insolvency).

This implies that firms in the sample with Z scores of less than 1.23 are regarded as insolvent. Firms with Z scores of between 1.23 and 2.90 are in the gray zone where insolvency is difficult to predict. Firms with Z scores of above 2.90 are solvent.

In addition to the Z score, liquidity ratios such as current ratio and quick ratio as well as the times interest earned ratio (solvency ratio) and the net worth were used to measure the solvency of SMEs in the sample. The current ratio is the ratio of all current assets to all current liabilities. The current ratio is the most commonly used measure of technical insolvency. The norm is a 2:1 relationship and implies that current assets should double current liabilities (Brigham & Houston, 1999). The quick or acid test ratio is calculated by deducting inventories from current assets, and dividing the remainder by current liabilities. The norm is a 1:1 relationship and implies that current assets, minus inventories, must be equal to current liabilities (Gitman, 2003). The times interest earned ratio is a measure of the ability of a firm to pay back interest on debt. This ratio represents how many times net income generated by the firm, without considering interest and taxes, cover the total interest charge. A firm is financially distressed whenever its earnings before interest and taxes are less than its interest expense (Gitman, 2003). The net worth is the difference between the total assets and the total liabilities of a firm. The net worth of a firm is positive if its total assets are greater than its total liabilities. It is negative if the total assets are lower than the total liabilities. The net worth is used to measure the legal insolvency of a firm (Brigham & Houston, 1999).

6 Results and conclusions

Demographic information shows that 31% of the respondents are operating in food processing. 18% in metal fabrication, 13% are in clothing manufacturing. Other products manufactured include wood 11 %, plastic, 9%, furniture 7%, leather, 7% and paper products 4%. 86% of the respondents are male, and 14% are female. 48% of the respondents are within the age bracket of 31-40 whilst 38% of the respondents are in the 41-50 age bracket. 5% of the respondents are in the 21-30 age bracket, 5% in the 51-60 age bracket and 4% in the 60 and above age bracket. 33% of the respondents have been in operation for between 1 and 5 years, 26% have been in operation for 6-10 years, 30% have been in operation for 11-15 years, 7% in operation for between 16-20 years, and 4%.

Access to debt finance: 94% of the respondents, applied for credit facilities from commercial banks. Six percent (6%) of the respondents never applied to commercial banks for credit indicating that there is a high demand for credit by SMEs from commercial banks. 32% applied for overdrafts, 30% applied for credit cards, 27% applied for long-term loans, 7% for installment sale credit, 3% for leasing and 1% for factoring. 61% of the respondents had their applications rejected, 39% of the applicants were successful. This implies that a majority of the respondents that applied for credit were denied by the commercial banks. This result indicates that SMEs have difficulty in accessing debt capital from commercial banks supporting the first hypothesis.

Debt and solvency of SMEs: The 39% of the respondents that were successful in obtaining debt finance were asked about their perception relating to the ability to meet debt obligations. 43% agreed that they have difficulties meeting debt obligations (principal and interest payments on debt). 57% of the respondents disagreed that they have difficulties meeting debt obligations. The results suggest that most SMEs that use debt finance are not insolvent.

The ability of a firm to meet its debt obligations can be measured by the current ratio, the quick ratio and the times interest earned ratio as depicted by table 1. These ratios (averages) were calculated from the financial statements of SMEs. The current ratio and the quick ratio of leveraged SMEs were 1.56:1 and 0.98:1 respectively. The times interest earned ratio of leveraged firms was 1.83. The current ratio and the quick ratio of leveraged firms are lower than the norm of 2.1 and 1.1 respectively. The times interest earned ratio of 1.83 implies that the net incomes of the leveraged respondents, provides a minimal cover for their interest expenses. The results of these ratios indicate that most of the respondents can meet debt obligations.

Insert table1 here

The data collected from the leveraged respondents was subjected to further statistical tests using the MDA.

Insert table2 here

The Altman Z scores show that 8% of the leveraged respondents are insolvent, 31% are in the gray zone where insolvency is difficult to predict and 61% are solvent. In addition, the

study used ratios to measure if the leveraged firms are technically and legally solvent. Technical insolvency is described as a situation where a firm's current assets are lower than its liabilities. Legal insolvency is described as a situation where a firm's total assets are lower than its total liabilities. The results as depicted by table 1 show that the average current ratio of leveraged SMEs is 1.56:1 and the average quick ratio is 0.98:1. The results indicate that although the current ratios are weak, the firms on the average can still meet debt obligations. This furthermore implies that the respondents are not technically insolvent. Table 1 furthermore depicts the average total assets of the leveraged respondents as R1,775,097 and their average total liabilities as one R1,055,741. The respondents' average total assets are greater than their average total liabilities. This implies that the respondents are not legally insolvent.

In conclusion, the current assets of the respondents are greater than their current liabilities. This implies that the respondents on the average are not technically insolvent. Furthermore, the total assets of the respondents are greater than their total liabilities. This implies that the respondents on the average are not legally insolvent. In addition, the Altman Z scores of the respondents show that most of the leveraged respondents are not insolvent. Therefore, the results do not support the second secondary hypothesis which states that the use of debt finance by SMEs leads to insolvency.

7 Managerial implications

SMEs need to keep detailed financial records: This survey revealed that not all SMEs prepare annual financial statements or keep books of account. Therefore, SMEs are not always able to present full accounting records and other documentation called for by the banks, thereby making the appraisal of their applications difficult. It is recommended that SMEs keep detailed accounting records, and audit their financial statements on an annual basis. This could be done through education and training of owners of SMEs especially business-related education, by attending short courses and seminars. The South African government should also intensify efforts to assist small firms with education and training. This is why the formation of the Small Enterprises Development Agency (SEDA), in 2005 is a step in the right direction.

The cost of debt for SMEs is generally high in South Africa. This is attributed to the high interest rate of about 15% prevailing in South Africa. There is the need to reduce the interest rates to reduce the cost of debt to SMEs. This will enable SMEs to use debt to maximize their profitability. Against this background, it is recommended that the government makes an effort to reduce the interest rates. This can be done by reducing the Repo rate. The Repo

rate has a direct impact on the financing costs of commercial banks, and also determines the minimum interest rates charged by commercial banks. The reduction of the Repo rate will reduce the cost of funds to small firms and increase their profitability. Furthermore, there is the need to improve the investment readiness of SMEs in order to make them attractive to the lenders. This will reduce the perceived risk of lending to SMEs by lenders. SMEs owners must be able to provide collateral security and adequate owners' contribution if they really want to access funds from lenders. Without equity, it is virtually impossible to get the required funding from commercial banks. Most SMEs depend on debt finance because they do not have access to adequate equity. Training and communication on the requirements of banks and trade creditors can help to make new SME owners to get investment ready and thus improve the availability of debt. It is also important that the Small Firm Loan Guarantees are well publicised and available to new SMEs. To improve the availability of debt, there is the need for personal development by the owners of new SMEs especially in the area of business and financial management skills through training. It is not realistic to create the expectation that any person with limited education, no entrepreneurial or management knowledge, no collateral and a bad credit record can obtain debt financing from commercial banks. The websites of the big four commercial banks have addressed business plan preparation by new SMEs. However, it is important to provide awareness to new SMEs that such facilities exist.

Efforts to increase the supply of equity to SMEs should lead to a decrease in their demand for debt. It is recommended that SMEs source equity from the Alt X Exchange. However listing requirements on this exchange are too stringent and most SMEs may be unable to meet the requirements.

Also, commercial banks in South Africa do not provide a breakdown of their loans and advances by sectors. This implies that it is statistically difficult to establish the percentage of loans and advances that are allocated, by commercial banks, to SMEs in South Africa. This study recommends that the monetary authorities in South Africa mandate the commercial banks to provide a breakdown of their loans and advances by sector so that it will be easy to determine the amount of funds which are allocated to the small business sector. Furthermore SMEs do not send annual financial records on their performance to any of the government authorities such as the Small Business Development Authority or Statistics South Africa. This makes it difficult to conduct academic exercises on small firms because there is no general pool where detailed information can be obtained. . It is recommended that SMEs should be mandated by the government to send annual financial records on their

performance to government agencies. Commercial banks also need to create awareness programmes on the requirements for extending credit facility to SMEs.

Empirical studies on the accessibility of debt to small firms reveal that the South African banking sector is extremely concentrated with the four large banks accounting for sizeable percentages of deposit taking and lending. These banks have primarily focused on lending to large firms. Efforts to relax the entry requirements into the banking sector and increase the number of lenders suggest an increase in the availability of credit to small firms. It is, therefore, recommended that the proposals before the South African Parliament, on second and third tier banking (which is expected to increase the number of banks) be approved as these expected entities are to deal, primarily, with small and micro firms. Second-tier banks are savings and loans institutions, while third-tier banks are co-operative banks.

8 Limitations of the study

This study covered only SMEs in the manufacturing firms in the Buffalo City Municipality of the Eastern Cape Province of South Africa. Gumede (2002) points out that the manufacturing sector is the most important sector of the South African economy. Furthermore, debt capital is limited to debt obtained by small manufacturing firms from commercial banks. Coleman & Cohn (2001) reveal that commercial banks are the most significant source of debt for small firms, channeling more than fifty percent of their requests

9 Areas for further research

This research work suggests lines of enquiry for further research. First, further research could determine if the findings of this research are consistent across different industries. There is the need to duplicate the research in other industries to confirm if the results of this research can be generalised across industries.

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Table 1 Analysis of quantitative data of the respondents

Performance measure	Ratios calculated from data collected from respondents using debt (leveraged SMEs)	Ratios calculated for respondents not using debt (unleveraged SMEs)
Profitability ratios		
Return on assets	11.38%	12.9%
Return on equity	3.99%	6.11%
Liquidity ratios		
Current ratio	1.56:1	1.73:1
Quick ratio	0.98:1	0.85:1
Solvency ratio		
Times interest earned ratio	1.83	-
Debt ratios		
Debt to assets ratio	51.68%	-
Debt to equity ratio	1.31 times	-
Total assets and liabilities		
Total assets	R1,775,097	
Total liabilities	R1,055,741	

Table 2: Altman Z scores of the leveraged respondents

Altman Z score	Definition	% of respondents
Less than 1.23	Insolvent	8%
1.23 to 2.90	Gray zone	31%
Greater than 2.90	Solvent	61%

MANAGING RESEARCH AT A UNIVERSITY

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Key words: Universities, Research output, Research Management

Abstract

All universities around the world conduct either fundamental or applied research to a greater or a lesser extent because conducting research is one of their main functions other than the educating task. Some universities go as far as to advertise themselves as research universities. There is no doubt in anybody's mind that scientific research is indispensable to the nation's health, prosperity, and security (Bauerlein, et al, 2010; Uzoka, 2008). Governments are of no exemption as they have also seen the importance of research and they have created various incentives to promote such research. For example, they reward the university and the researcher monetarily if peer reviewed papers are accepted in internationally or nationally acclaimed conferences or recognised journals. Pressure is exerted by management in various departments to produce a certain number of articles per annum. However many authors (Bauerlein, et al, 2010; Harbboe-Ree, 2007; Cockburn, 2001; Mintrom, 2008), warn us about "quantity" versus "quality". The truth is that there is has been a constant increase on the number of researchers as there has been a growth in the refereed academic/ scholarly publications at a rate of 3.26% per year (Bauerlein, et al, 2010). The newly formed University of Johannesburg (UJ), is of no exception and the formed research unit aims at increasing the research output. This paper is a post facto case

study where an attempt is made to create a research management model for UJ so that a maximum output can be achieved.

Introduction

As governments around the world are decreasing their subsidies to universities, then universities have to move away from a non profit making organisation to one of business organisations. At the same time they have to maintain education standards, widen participation, allow access to more learners, compete in the market place in attracting high calibre learners and produce enough graduates for the market place. Amidst all these, they also have to be recognised as research institutions by conducting fundamental and applied research. Innovation in producing new knowledge, and developing partnerships with the corporate world become the “survival kit” of the university and the development of a nation. Howard (2003) uses the importance of publishing works by academics for promotion and tenure as a reason for increasing the research output. The cliché used is “publish or perish” which could lead to publishing for the sake of it and not for the sake of innovation. Using the number of citations as a criterion to judge the importance (quality) of a paper Bauerlein et al (2010) and MacGregor (2004) found that, as the number of publications increases, so does the number of redundant, inconsequential, and outright poor research also increases. Harboe-Ree (2007) supports the idea of using citations as a criterion rather than quality, she found that using quality, which is associated with peer reviewing and ranking of the journal, as a criterion has many flaws. However, assessing quality of research is very problematic (Bauerlein, et al 2010, Tatabarti, et al 2010; Harboe-Ree, 2007). In UK, the Research Assessment Exercise (RAE) was created to measure the quality of research which would have an impact on the funding of the universities using thus a bottom-up approach (Charlton & Andras, 2007). Charlton & Andras (2007) advocate a top-down approach which is also associated with the number of citations. Nicholls (2007) on the other hand introduced the Research Quality Index (RQI) which uses publications, research grants and higher degree by research activity.

Internal and external pressure is exerted on the universities by: governments to improve their throughputs (number of first year enrolments/ number of graduates), better demonstrate their social and economic contributions or return on investment; other stakeholders insist on universities to engage more with the world of business and commerce since knowledge promotes economic advancement; and finally globalisation is forcing universities to compete for academic talent, quality students, and third party fundingn (Mintrom, 2008; Uzuko, 2008). The University of Johannesburg (UJ), a newly formed comprehensive university, is faced with these challenges like other higher education institutions. After the merger of three

higher education institutions (Vista, Technikon of Witwatersrand and Rand Afrikaans University) which gave birth to UJ, and reconstruction of many departments, a new vision was created and research has become a top priority. This study is concentrating at UJ's current research structures and research outputs and ways to increase such output without losing sight of the educating task. For Mintrom (2008) this is one of the “dilemmas” that may universities are faced, according to Mintrom (2008). UJ is a unique institution due to its academic and vocational careers that it offers. Such uniqueness can create problems in the research output since the vocational side's academics are more practical oriented as quite a number of them come from industry. The university though is trying to change that.

Universities and Research

As far as 1800's Alexander von Humboldt, founder of the University of Berlin in 1809, was instrumental in spreading the idea that “universities should be placed where original research is conducted” (Denning, 1997). The key word being “original” even though certain ambiguities do exist as to “how much original is a certain work”! Denning (1997) defines innovation as “a shift in the standard practices of a community that makes them more effective at what they do.” He recognizes four types of research that can produce innovations:

- (1).generating new ideas;
- (2).generating new practices;
- (3).generating new products; and
- (4).generating new business.

Denning argued that “the modern Research University is hampered by a belief that the discovery of new ideas (1) is the main path to innovation.” Many in the corporate community would rank these pathways to innovation from (4) to (3) to (2) to (1), which is just the reverse of the ranking by many in the university community. Originality and novelty characterises the first where certification of the new idea is done by peer reviewers. The second type is practiced by a faculty member when she/he offers new ways to think about, understand, and be competent in a subject. The emphasis of research is on “understanding that produces competence” (Denning, 1997). Denning maintains that today “a large number of faculty members are expertly practicing the second kind of research while under the illusion that they are engaging in the first – and not getting credit for either.”

Furthermore, if it is accepted that universities should not be just research universities but also teaching universities, then it is reasonable to state that the university should strive for excellence in both. This idea was heralded also by Humboldt back in the 1800s when he

said that unity of teaching and research as the centrepiece a new university (OECD,2005). But striving for excellence in teaching and research, although it sounds ideal, it creates new problems as it is difficult to define what is exactly meant by “excellence” and what criteria should be used to measure it. It can be argued that if “something can not be measured it can not be managed” (Sveiby, 1997). This should not discourage universities from creating quantitative as well as qualitative measures to measure intangibles. What universities have done over the years is that they have raised the academic criteria for employment at the university because it is assumed that the higher the academic calibre of a lecturer, the better the quality of teaching and by “default” the greater the research output since the majority will possess a doctorate. The problem though will arise when one deals with a comprehensive institution where it might not be possible to employ highly qualified lecturers in certain fields as they earn more money in industry (e.g. mine engineers and surveyors). However, even in such institutions, applied research could be encouraged; and institutional research should become a way of life rather than doing research for the sake of it.

There is no doubt in anyone’s mind that “excellence” in research and teaching can be used as leverage for sustainability and lead to the creation of a “successful” university. But this is another concept that has not yet been fully defined. Shattock (2003:3) for example found that very little systematic research has been done to identify the characteristics of a successful university and what criteria should be used to judge a university and what factors can be shown to sustain success. He maintains that although universities are traditionally research and teaching institutions, university success is often equated with research reputation alone. For Chiemeke et al. (2009, cited in Okafor & Dike, 2010) in fact it is the scientific research output that determines how good a university is. Other authors (Leydesdorff, 2008; Cave, et al. 1997) use research output and ranking of universities which has become an industry in itself; and measurement of either has been problematic.

Williams (2003) speaks of “enterprising universities” which are market-driven organisations and if so it guarantees their survival. A certain schism though exists between satisfying market needs (producing enough graduates to fill industry posts) and developing abstract and critical thinkers who could conduct research for the sake of producing new knowledge and thus increasing the research output. UJ perhaps is in an advantageous position because it can afford producing both due to its comprehensiveness. However, after the merger, UJ is in a “transitional phase” where vocational and academic teaching staff are still trying to position themselves with respect to the new mission of the UJ where research tops the list of aims. This is in line with government demands for an increase in research output.

Many incentives have been put into place to encourage such moves (e.g. funding and financial incentives for researchers).

In spite of the problems that are associated with the lack of clear definitions as to what constitutes excellence and what makes a university to be successful, this paper aims at creating a framework for the management of research at a university which is interlinked with the management of the teaching function. The philosophy is that creating a generic model and using action research to keep improving the model for managing research, is more to the benefit of the university rather than working on an ad hoc bases.

Problem statement and research objectives

The problem to be investigated is: “How can research be managed at a comprehensive higher learning institution to maximise the research output?” To answer this question the following sub questions need to be answered:

- i) What is research output?
- ii) How can research output be managed?

A literature review on the core constructs will be followed by the research method and conclusions and recommendations will be made based on the analysis of the results. This is a case study of UJ.

What is research output?

As universities are “caught” with the one foot in teaching and learning and the other in research, some cling more towards the one than the other side. Some proudly advertise themselves as leading research institutions others as institutions of excellence producing the future leaders in all fields. Perhaps some clarity is necessary first as to what research is. Research is defined as original investigation undertaken in order to gain knowledge and understanding (HEFCE, 1999:5, cited by Bushaway, 2003:34). With respect to research output or institutional research, there is no clear definition as to what it entails (Howard, 2001). However, for the purpose of this study the existing classification of the types of research that exist will be used as the basis for understanding what is meant by research output. Research can be divided into fundamental and applied and the later is well defined. Briefly it is research conducted in view of improving a process, solving problems in various fields, and in general adding more in-depth knowledge in that specific field. The fundamental research aims at increasing the knowledge bank of the university.

If it is true that “we can not manage something if we can not measure it” then it is necessary to create certain criteria which can be used to measure the output. Accepting that measuring research output is problematic many existing measuring instruments use citation index as their main criterion. This method could be valid and reliable up to a point and should not be dismissed completely (Tavarti et al. 2010). Charlton and Andras (2007) maintain that it is hard to manipulate but they do agree in general with other authors who highlight the flaws such as: self-cites, clique-citations, review articles biasing the count, “salami-slicing” (producing ‘many papers’ out of one study), and the source of database not containing all the relevant journals (Nicholls, 2007; Harboe-Ree, 2007). The last problem is also highlighted by Jacob (1998, cited in Okafor & Dike, 2010) where he found that most of the South African publications were not cited in the Science Citation Index (SCI). But this problem could be true for other respectable databases where authors do not necessarily publish their work and thus citation is not possible. Olukoju (2004, also cited in Okafor & Dike, 2010) added the financial problem where some libraries can not afford annual subscriptions to various journals and thus researchers do not have access to them. In fact Harboe-Ree (2007) cites a number of authors who established beyond any doubt that open access favour number of citations. That is a certain article that everybody has access to is cited many more times than the one that is not. If this number of citations is not accepted but only the one from reputable databases such databases if they have restricted access then the number of citations is not a true reflection.

In spite of all the problems that exist in measuring research outputs a number of authors have devised metrics which could assist the institution with the measurement. Some such instruments are: Performance Indicators (PIs) which can be used for assessing the efficiency and effectiveness of universities. Cave, Henkel and Kogan (1997) identified five PIs:

- 1) Number of research students;
- 2) Output of research (publications, patents);
- 3) Quality or impact indices based upon citations of publications or impact of journal;
- 4) Peer review (subjective);
- 5) and Reputation rankings (subjective).

These indicators can serve as the basis for measuring university's output in research as well as teaching and learning. However, some modification has to be made that can be applied to a particular university as different criteria are applied with respect to allocating research

funds for different projects. The problem with this classification is that other researcher's see (1) and (4) to be part of (2).

Almost all authors agree with Cave et al. (1997) that publications (journal articles, technical reports, books or chapters in a book, patents), peer reviewed papers, and number of postgraduate students comprise the bulk of research output. Where they differ is on how to measure them and what is considered to be of quality. For example Nicholls's (2007) uses benchmarking methodology, Research Quality Index (RQI), which encompasses three main areas of research activity: publications, research grants and higher degree by research activity. Each of these areas has their own quality index: the publication quality index, the research grant quality index, and the throughput of PhD students.

Then comes the problem of quality versus quantity. Assuming quality can be measured, quantity is not necessarily bad for a number of reasons: No researcher can produce a "master piece" first time round. It is a developing process. It is only through production of papers that the novice researcher can become an expert. In fact Nichols (2007) found a correlation between high publication and high quality (or low publication and low quality). Furthermore high quantity could imply high participation by staff in research. And non participation has been identified as one of the inhibitors of research output (UJ, 2007).

Tatavarti et al. (2010) introduced the Research Turnover (RT) to measure the quality of university research. This method is a complex mathematical method which takes into account the number of: publications in peer reviewed and refereed journals, patents, sponsored research projects, consultancy projects, books published, and PhDs supervised. Each of the RTs of these carries certain weighting factors, number of publications or participants or PhD students and other variables. The sum of the individual RTs gives rise to the university's RT.

Finally, Uzoka (2008) suggests a multi-dimensional, multi-criteria model for assessing research output which incorporates a number of existing models such as multi-criteria and fuzzy multi-criteria model. According to the author, existing methods such as benchmarking, best practices, and total quality management have problems with reliability and validity due to a number of subjective factors. This model is also a complex mathematical model but it is a more encompassing model as it measures quantity as well as quality of the research output of a researcher. For example, it does not take into account only publication in reputable journals but every single contribution an academic makes to new knowledge promotion where all papers (peer reviewed or not) presented are recognised but are given different weights.

Research output in tertiary institutions in the Republic of South Africa (RSA)

When academics are involved in research activities, these could entail a number of such activities: supervision of masters and doctoral students; being external examiners for undergraduate modules; editing research-based books; registering product(s) for which intellectual property rights apply; publishing a research-based book; publishing their work in accredited journals and presenting peer reviewed papers (Middaugh, 2001; UJ, 2007). Some of these activities pertain to teaching and learning while others to research output. This study concentrates on the latter. What is to be emphasised here is that engaging in research activities (input) does not guarantee high measurable productivity (output). Nor does it tell us anything about the factors that contribute to such productivity (Middaugh, 2001) or the quality of the product (Bauerlein et al. 2010).

In RSA, recognised research output briefly is the one that deals with publications (to accredited journals, books and peer reviewed papers) where certain units are assigned to them. For example, 1 unit for a journal if it is one author and half a unit if there is a co-author. Also, half a unit in presenting peer reviewed papers at conferences. Units are also assigned for the publication of books. The statistics supplied by the Research and Innovation Division (RID) of UJ indicates that for the years 1988-2003 there has been no significant increase in the research output of the universities in South Africa, averaging 5 200 units per year. In some of them there has been a steady decline (e.g. University of the Witwatersrand from 1 026 units in 1988 to 557 in 2003) while in some others a significant increase (i.e. Unisa from 266 in 1988 to 435 in 2003). The greatest majority maintained more or less the same research output which varied between 40 and 600 units during the same period.

With respect to Technikons (before mergers of institutions or re-classification to Universities of Technology) for the period of 1991-2003 there was a steady increase in the research output from 24 units to 220 units. The Pretoria Technikon had the most significant increase (from 7 units to 70 units) for that period. The rest showed a yo-yo effect.

For the year 2004, when there was more detailed and differentiated statistics (books, proceedings and journals) the University of Cape Town was tops with 44 units for books published and 49 units for proceedings while the University of Pretoria tops the units for journals (997 units). With respect to the Technikons there was only a 0.5 units for Vaal Triangle for books while Tswane Technikon topped the proceedings and journal publications with 18 and 62 units respectively.

Looking at the top seven institutions, the output varied between 1 063 and 41 units in 2004 compared to 954 and 30 in 2003. What is of importance here at this stage is that there was no significant improved research output in institutions that merged. The reason could lie on the fact that universities for a long time promoted research while Technikons did not. What would have been of interest here is past research individual output of Vista (a distant university), RAU and Technikon Witwatersrand and the last years research output of UJ. However there are no statistics presently, with respect to this effect.

In conclusion, there appears to be a trend by tertiary institutions towards becoming research, teaching and learning institutions and an attempt is made to excel in both. However, the way these two functions are managed will determine their success or failure. The South African government, having a stake in tertiary education, on the one hand is trying to assist by providing funds (e.g. NRF, National Research Fund) and thus expecting institutions to become research institutions and on the other, increase in throughputs. The onus lies on management to succeed in both.

Research management and UJ

Managing any activity in an efficient and effective way requires a clear identification and subsequent measurement of the input and output. In the university sense there are the two main activities: the teaching and administration (input) and throughput (output) and the research activity (input) and publishing (research results, books, peer reviewed papers and so on) (output). While the formal activity is managed at every level of management of the university, the latter's management requires a highly specialised management and that is Research Management (RM). RM requires the skills of project management to be combined with the ability to formulate a long-term strategy and implement its objectives in terms of operational development (Bushway, 2003:148). The research manager's duties could entail a multitude of tasks such as project, financial, and sponsor management, quality assurance, logistics, partnerships and link management and other activities that promote research; RM aims at creating a conducive climate for the generation of research ideas (Bushway, 2003:29). To achieve this it is necessary to identify factors that contribute to research output, develop the necessary policies and procedures so that anyone that wants to do research of any form he/she just has to read such policies and procedures. This makes management of research at university very effective.

Mintrom (2008) discusses the “pressures and dilemmas” of administrators in managing research at a university in great detail. The pressures deal with increasing research output and dilemmas that deal with keeping the balance between the teaching and research functions, quality versus quantity, use of incentives, preventing unduly competitive dynamics and keeping the balance between entrepreneurial and pure research. The author used the ideas of Frischmann (2005) and Lester and Piore (2004) and developed his ‘general model of the research process’.

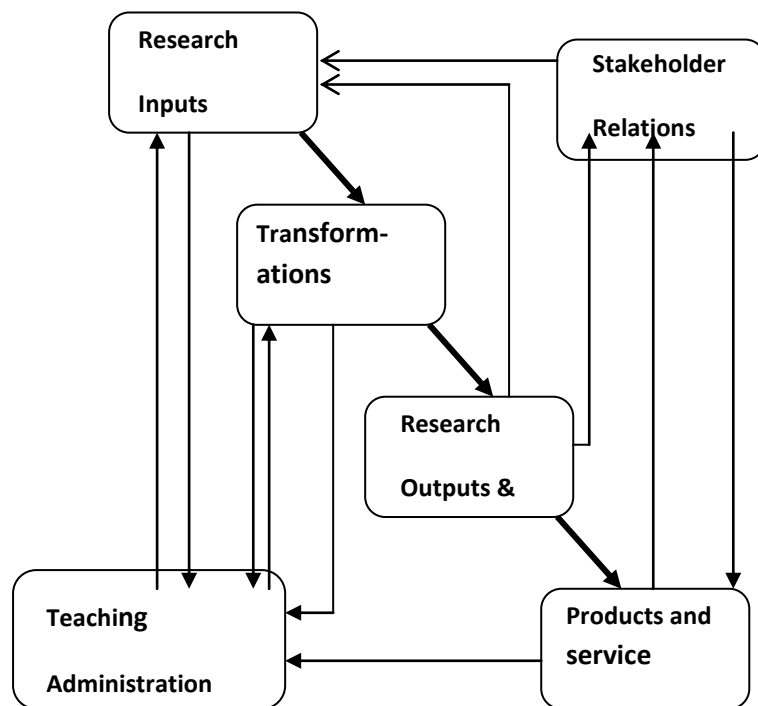


Figure 1: A general model of the research process (Mintrom, 2008)

The four key components being research inputs, transformation, research outputs and byproducts, and product and service development. The various linkages between them and, administration and stakeholders is shown. Briefly research inputs includes the various resources necessary for research: academics, formal and informal rules of conduct, physical and financial resources and administrative competency. Transformation perhaps is very appropriate at UJ where a mind shift is necessary by a number of academics to see value in research. Transformation includes: balance between basic and pure research, converting inputs to outputs, collaboration, and encouraging research and teaching otherwise it leads to the isolation of the researcher. Perhaps the most important transformation is the development of a research culture. Research outputs and products deal with publications, books, peer reviewed articles and so on as described earlier on. With respect to product and service development, research outputs could be applied to real-world problems. Thus

not only new knowledge is created but also applied and can contribute to the betterment of society. Utility of generated new knowledge has been emphasised for decades. Joint enterprises between communities, private sector on the one hand and government on the other have been on the increase (Mintrom, 2008). What a university should not do is generation of new knowledge should not be just of present utility nature but also for future possible use. The human mind must operate in a “problem thinking” mode and not just on a problem solving mode. Mintrom (2008) accepts that commercialisation of universities might be unavoidable but this creates better relationships between them and other stakeholders.

Mintrom (2008) argues that universities can not sustain or advance themselves without the support of funders and the general public (other than the government). It is an absolute necessity that the administrators promote and maintaining a strong public image for their institutions. By producing quality research and transforming the research outputs into socially useful products it can only lead to more funding and support. With respect to administration, teaching, and services the academics have to decide as to how they spend their time performing their various functions. These functions should be seen as synergistic, as they are interdependent. The administrators have to be aware of that so that no conflict exists between these functions (Mintrom, 2008).

This model described above is very generic and it is the duty of the administrators of the research function of the university to modify it to fulfil their needs. They can take cognisance of the findings of the internal research and use them to develop a model applicable to their particular situation. At UJ the managing of research is performed by the RID.

When the UJ came to existence in 2005, many man hours were spent to create a new vision and mission which would cater for both the academic and vocational needs of young people as well as become a leading teaching, learning and research institution. In a recent Senate Meeting (23 October 2007) the vice chancellor re-iterated the importance of research as well as the strife towards excellence in teaching and learning. Such excellence is embedded in the criteria for promotion and the mission of the institution. The difficulty in defining excellence also arose and it was agreed that each faculty should design their own criteria as to what “excellence” means. This section deals with the RID of the university which guides and controls all research activities at the newly formed university. Under its umbrella there are various research centres such as: the centres for the Study of Culture and Language in Africa, Communication research, Small and Medium Enterprise Development, Banking, business and Tax Law and for the Department of Transport and Supply Chain Management.

In each Faculty there is also a research officer, who overlooks the research activities of the faculty.

Research methodology

This is a post facto research which makes use of a comprehensive study done by the RID unit of UJ in order to improve research output as well as manage research effectively. RID conducted a qualitative as well as a quantitative survey in 2007 (UJ, 2007) with the view of establishing factors that impede or promote such output. The results were on the one hand encouraging on the other hand further research is necessary as the results were not conclusive.

The surveys

The qualitative survey: Focus group interviews took place and two open ended questions were posed to the respondents. The answers to these questions in the quantitative survey were used to create categories as points of discussion.

The two questions were:

- “In the space provided, please indicate any other issues that you believe either enables or motivates you/disables or de-motivates you to do/engage in research. Please elaborate.”
- “Please use the space below to enter any other comments regarding research capacity you would like to bring to our attention.”

400 responded to the quantitative survey and the respondents were a mixture of academic and research staff with varying levels of expertise, experience, working in various faculties and teaching and studying at various levels. The researchers make it quite clear that the results pertain to the respondents only and it can not be generalised for all academic and research staff. Processing the answers, the researchers identified 10 categories and these categories were used as points of discussion in the focus group interviews. These categories were:

- a) resistance to research (“came to teach not to do research”)
- b) facilities and equipment
- c) management/structure attitude
- d) quality of students
- e) research funds

- f) salary/incentives/personal recognition
- g) support for novice researchers
- h) support/admin structures
- i) time to undertake research
- j) training

With respect to the focus group interviews there were three groups which consisted of researchers, identified as high output researchers, and the interviews lasted for two hours. The Nominal Group Technique (NGT) (Delbeck & van de Ven, 1971) was utilised. The first group consisted of 25 participants but due to its size it was split into two sub-groups. The second group consisted of 8 participants while the third group of only 3 participants. The NGT was not strictly adhered to the third group due to its small size.

The report indicated that that the 'time to undertake research' category elicited the most responses. This is especially true in the vocational side of the university where teaching loads have been maintained after the merger and now the academics are required to add research in their daily repertoire. The second category that received a lot of attention was 'the support for novice researchers.' It was accepted that such novices require the assistance of mentors who could motivate and guide them in research activities.

The lack of incentives was also highlighted and some of the respondents mentioned that some academics resort to consulting work to supplement their income. It can be argued that conducting such activity even with the knowledge of the university is not an excuse for not doing research for the university, which is the main salary provider. However, universities (and education in general) can not compete with the private sector remunerations, and as a result they will allow academics to supplement their income by doing extracurricular work under certain conditions. On the other hand if outside work is directly related to the academic's profession it can add value to research output in an indirect way as it is possible such work to generate research topics.

The other important category was allocation of funds. Funding of research has many different categories. It is a complex issue which needs clarity. In brief, funding can take the form of funding of research projects, applied research, paying the salary of a replacement so the academic can go on sabbatical leave, attend conferences and many more. UJ receives its research fund from external and internal sources. The NRF, the Medical Research Council, the Water Research Commission and the National Laser Centre contribute the external funds. State subsidy generated through accredited research publications, and

research based postgraduate qualifications, income from investments, levies from use of facilities and commercialisation of intellectual property contribute to the internal funds. In certain cases private companies and international agencies also finance certain research projects either by postgraduates or academics.

Training in the Internet and in the use of some sophisticated equipment was another issue raised. However, what can be added here, which could have been “missed” by the respondents, was training in writing articles, either for conferences or scientific journals and post graduate supervision. With respect to supervision, a mentoring system could also be used. This is not about co-supervisors but assistants to supervisors. However, such practice could be received negatively if the supervisor sees it as a “threat”.

The other categories also shed light to some other factors that contribute/hamper research. The one that needs more clarity is the attitude of middle and top management towards research. However, a distinction has to be made between managers at the academic side and the vocational side of UJ. The former are more tuned into research than the vocational side.

The quantitative survey: An important aspect of this survey was that the majority of the respondents (63%) came from the academic side which is not necessarily a representative sample of UJ due to radical past differences that existed (and still exist) between the academic and vocational sides with respect to research outputs. With respect to faculty membership, although the majority (109 or 36%) were lecturers and senior lecturers (94 or 32%), 50 (17%) were professors which implies many had vast experience in research and their needs can differ from the rest.

With respect to teaching loads, the respondents who teach at Masters and Doctorate levels have on the average 8 and 3 students respectively. No mention is made of the number of students at the undergraduate level or the number of hours per week. Nor is it mentioned if they have peer tutors or other type of assistants.

In answering the question “what drives one to do research?”, it was clearly indicated that those involved with post-graduate supervision, having presented papers in national or international conferences or published a paper in an accredited journal have a greater interest, experience and knowledge of research than those that have not been involved in such activities. In line with this goes the idea by some established researchers that work-related responsibilities, including teaching serve as a barrier to research output. Perhaps

this is based on the assumption that there should be a group of researchers who, if they are specialists in a field, to perform 100% research rather than spend time in teaching and learning. Of course, though there are universities where academics are involved in research only, it can be argued that if they are so good at their field, shouldn't they also impart their knowledge to the prospective researchers?

Finally, the results of the two surveys can be used as the basis for further research where the uniqueness of UJ has to be taken into account and become a topic of discussion in each department rather than exerting pressure on the individual academic "to increase research output".

Discussion and recommendations

It is suggested here that Mintrom's (2008) generic model is used and by conducting an internal research into the attitudes and beliefs of the academics as to what is it that encourages them to conduct research or what barriers exist a particular model can be developed. Although the research took place at UJ, which could be one of the limitations of this study, there is no reason as to why other universities should not conduct their own research and come up with their own model. The results here could be used as indicators and it is accepted that such indicators can differ.

The two surveys conducted at UJ shed some light into the existing factors that promote/hamper research. But managing research of a university requires certain criteria that research can be measured against. A number of alternative methods were discussed earlier in the paper. Irrespective of the method used, criteria have to be established and the nature of the university will determine also the way that research needs to be managed.

Firstly, it is necessary to identify the various groups. For example:

- A. Established researchers
- B. Unwilling to become researchers
- C. Researchers in the making
- D. Willing to become researchers

While (A) and (B) can be established accurately (C) and (D) require a totally new way of managing. The university will have to create the means for these groups to become researchers. Using the data collected from the two surveys, a number of factors had emerged which promote/impede research. The most important being the time factor, the

second being training and the third being the different ways of getting funds for conducting research. An implicit factor could also be the desire to do research. With respect to the time factor, it is necessary to keep a balance between excellence in teaching, learning, throughput and research. If it is assumed that a highly motivated lecturer will “find time” to excel in both, then the university should create a conducive atmosphere to encourage such lecturer by acknowledging his/her efforts. This can happen by the use of various incentives. But “finding time” is one thing, having time available or allocated by the university is another. So far, the university operates on an unsystematic way where some faculties “free” a lecturer for one or two days from teaching and these days are assigned for research. The university then demands that the lecturer produces a minimum of research units per year. Fox (1999) found that by increasing the teaching loads by 10% there was a decrease of 20% in the research output. But by increasing the grants by 10% there was an increase of 15% in the research output. Then it can be argued at this point that reducing teaching loads could lead to increase in the research output but such increase is not guaranteed because there are other factors involved too, such as motivation and how such time is allocated. This point is reinforced by both surveys conducted by the UJ's RID unit. It is recommended here that the university designs all necessary criteria with respect to teaching loads and research output. The other important point which is in line with the above classification is profiling prolific researchers. This implies that a distinction has to be made among those willing to do research and those not willing.

With respect to training, it is proposed that there are clear guidelines as to what constitutes a research output for a particular university. What is suggested here is that the uniqueness of UJ necessitates the division of research into vocational and academic and also between applied and fundamental research. The vocational side could concentrate more on applied research while the academic more on the fundamental research. Furthermore, there should be two categories: the one will be related to teaching and learning (throughput) and the other into publications. The two could be used as a measure of effectiveness and efficiency of the university. While the former is purely quantitative the latter is mostly qualitative and it involves the creation of criteria which can be used to measure such output. One area that should be looked at when criteria are designed is, which publications/conferences should be funded by the university research fund and which should be funded by a faculty or department. For example, if a lecturer is teaching in field A, but produces a paper in field B, should such paper be rejected and not funded by the university?

A classification of publications could be:

- Papers in accredited journals
- Papers in non-accredited Journals
- Papers presented in national conferences (peer reviewed or not)
- Papers presented in international conferences (peer reviewed or not)
- Presented papers that carry monetary value (by DoE)
- Presented papers that do not carry monetary value (by DoE)
- Books published
- Writing study materials

This classification is in line with Uzoka's (2008) idea in measuring research output.

The presentation of papers should receive great attention because normally it is the first step towards producing scientific papers for journals. Even if such papers are not peer reviewed the university should sanction (to a limited extent) such presentation because that is where the prospective researcher makes contact with other established researchers. Furthermore, his/her ideas could give rise to new research which otherwise would not have taken place had the paper not being presented. By funding the presentation of a paper, the university is investing in the development of the academic and it should allow at times for "a bad investment". Furthermore, in order to encourage up and coming researchers, collaboration should be promoted with established researchers. They can be used as mentors and guide them to the research arena. Perhaps the first step could be co-presentation of papers nationally and internationally even if some do not either carry monetary value or their work is not published in accredited journals. This can be used as a motivating factor for the lecturers into conducting research. Credit should be given for anything that carries a research component. What needs to be re-emphasised here is that if teaching and learning (only) is to be treated equally with research output then status wise the two activities should be rewarded equally. Giving more credit to the one at the expense of the other will be counter productive. The mentoring system was another aspect that was highlighted by the two surveys by RID.

With respect to lecturers who are willing to become researchers, various workshops should be held by the research division to enlighten these lecturers as to the opportunities that exist, the funding and so on. Again, the mentoring system should be used so that the prospective researcher can develop confidence in conducting research and publishing. Great emphasis should be put in this group as it is the university that will make or break such prospective researcher. Perhaps this should be taken a step back and that is creating a research culture in the students from an early stage rather than just the postgraduate level. Presently,

various courses do encourage that by having students conducting informal research when they have to produce assignments that comply with the Harvard system of referencing and using different types of sources (i.e. internet, text books and scientific journals) as early as the first year/semester. But this is more of an exception rather than the rule. Other courses include research methodology as part of the curriculum. In both cases, it is necessary to resort to more applied and innovative research, as well as assignments or projects to comply with certain rules and regulations of accredited journals. What needs to be kept in mind is that research has shown that it takes more or less 6 years from the time a researcher presents his/her first paper at a conference to the time he/she publishes in an accredited journal.

Another point which should be considered is the idea suggested by Harboe-Ree (2007), that of the creation of open access institutional repositories. Open access encourages more citations and thus more collaboration and distribution and sharing of knowledge. Open access encourages also transparency, especially of funded projects which are funded by tax payers.

A final point to be made is attitudes of middle and lower management towards research. For example, in the vocational side, as the statistics indicated, the research output was very low compared to universities' output. One of the reasons could be that management of vocational institutions did not have a directive for conducting research, in general, but only applied research in certain fields. After the merger they found themselves in the precarious situation where demands are made for increase in the research output of their unit. Their negative sentiments towards research are transferred to their lecturers and such negativity will have to be eliminated. What tends to happen is that the status quo before the merger is maintained by many departments where all lecturers are overloaded with teaching time and now they are expected to conduct research as well. Furthermore, the lack of clear guidelines as to what constitutes a research output leaves the decision in the hands of the middle and top management and thus there is lack of objectivity. This was considered as the second highest inhibitor of research output by RID.

Conclusion

The above exploration into managing research at a university, revealed that there are many factors that promote/impede research. The need to manage research is an absolute necessity if research output is to reach its optimum level. In short, unless a conducive atmosphere to research is created, universities in general and UJ in particular will not be able to achieve their aim of becoming top research institutions. Clear guidelines as to what

research output entails, the various incentives (not necessarily those that carry monetary value) and available funding, identifying and assisting prolific researchers and novices, and publicly acknowledging contributions could be the foundation for creating a top research institution.

Implications for managers

This paper highlighted some important issues about management of research outputs at UJ but as the literature review showed, they are encountered elsewhere in the world. Managing research at a university is a top down approach. Having a department such as the RID of UJ is not sufficient. A research culture has to be promoted but not at the expense of the educating task as both carry equal value. The management should invest time in identifying prospective researchers and make it possible for them to conduct research of any nature and allocate sufficient funds to encourage them even though it might seem as a “bad investment”. Established researchers should not only be given all the necessary funds and encouragement but also be used as “mentors” for up and coming researchers.

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**THE USE OF CONSULTANTS VERSUS INDEPENDENT STRATEGY FORMATION FOR
SMALL AND MEDIUM BUSINESS: PRELIMINARY FINDINGS**

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Abstract

Small and medium enterprises are seen as the “economic equivalent of a canary down a mine shaft”. In time of economic recession, it is typically the small and medium enterprises that “keel over first”. The year of 2008 saw a striking fall in business confidence, which was further aggravated by worsening economic conditions. This led to the implication that small and medium enterprises were even more pressed in the battle for survival. The significance of forming an appropriate and sustainable strategy will be a key determinant of the small and medium enterprises’ survival. The diverse topics relating to strategy formation demonstrate that formation of strategy is not a simple task, whether completed by the small enterprise owner or through appointed consultants. There is diversity in the research outcomes and views of many formidable authors in this field.

Introduction:

There is currently no evidence pointing toward a more effective method of strategy formulation for small and medium business (Meers & Robertson, 2007:302). Planning in small and medium business, according to Gibson & Cassar (2002:175) is mostly adaptive, short-term and focused on managing scarce resources. Bennett and Robson (2003:798) established that the main source of external advice for small and medium business is from the private sector, namely accountants, followed by lawyers, banks and lastly consultants.

According to Dyer and Ross (2008:133) small and medium business failure is attributed to the lack of planning or due to the lack of owner managerial skills. This has lead to accelerated growth in consulting to small and medium business over the past 20 years. Kraus, Harms and Schwartz (2006:335) exposed that in the last 25 years, there have only been 24 empirical studies covering strategic planning in medium business. They conclude, therefore, that research to strategic planning as to small and medium business is still in its infancy. Similarly, Griggs (2002:25) conveys concern pertaining to the depth of previous research related to small and medium business and strategy formation. He argues that such research used one-dimensional measures, which are not in line with the multi-dimensional nature of planning systems as evidenced in other strategic planning literature.

Bennett, Robson and Bratton (2001:1531) report that the scale of consulting services has grown swiftly in the past 20 to 30 years in all Western economies, not only in the number of firms, but also in the number of employees.

“You may have a grand idea for your small business, but without a coherent strategy expressed in a strategic plan, odds are you’ll fail” (Sandberg, Robinson & Pearce, 2001:12).

Problem

Small and medium business do not have a proven approach to strategy formation, with no distinction made between the outcomes in respect of employing external consultants and developing a strategy independently and internally within the organisation.

Research question

Will small and medium business derive greater benefit in the strategy formation process through appointing third party consultants or through self-development internally?

The primary objective of this study is to examine the trends in strategy formation for small and medium business. Secondary to this, the study will attempt to identify which strategy formation approach produces desired results for SME’s: appointing external consultants or keeping strategy an in-house activity.

Literature review

In order to preserve their competitive position, businesses are challenged to boost the resources allocated to innovation (Bennett & Robson, 2003:797). This results in businesses calling for increased specialist knowledge which results in the improved need for external advice. The level of competition increases as the SME advances beyond its niche and expands its activities into a larger market. The strategic positioning of the SME, in its attempt to improve its performance, is part of the life cycle of the SMEs’ development. The probability is that over time, as the SME grows, they will have an increased need to seek external advice.

Bennett and Robson (1999:352) found that SME’s have a greater need for external assistance in the form of advice from consultants, but are more reluctant to do so than their larger counterparts,. Significantly, the most reluctance is among owner-managed businesses. Bennett and Robson (2003:797) moreover indicate that SME’s are less willing to use external advice services, because they fear the lack of control. There is a lack of information on where to find advice.

Small and medium business owners favour their own experience and intuition (Dyer & Ross, 2008:133) as compared with getting external advice. The reasons for this are businesses

have a preference for independence and would not want to admit to not knowing their own business. Yet, in reference to technical information, small and medium business owners prefer to get external advice; this applies to legal or financial advice from accountants. Findings from research by Pineda, Lerner, Miller and Phillips (1998:70) show that SMEs turn to internal sources of advice as opposed to external sources. This is further broken down to the type of decision involved. Small and medium businesses are most likely to seek information when making decisions related to their products, and least likely to seek information when making technical decisions.

Economic and technological changes in the global marketplace are resulting in management development needs evolving for small and medium businesses, which were traditionally reserved for large businesses (Mughan, Lloyd-Reason & Zimmerman, 2004:224). The specific consulting needs identified for SMEs pertain to information, operation and processing activities. Bennet and Robson (2003:797) implies that the SME can improve its' competitive standing and performance by augmenting their strategic and information expertise. This is where the external business advice in the form of consultants can be implemented to develop such expertise.

Rapattoni (2008:18) suggests an alternative for seeking expert advice for small and medium businesses is the creation of an advisory board. It offers a huge competitive advantage in that the advisory board will challenge the small and medium business to think strategically about growth, and will also provide a structure for reliable decision making. Lorigan (2008:70) concurs that the introduction of a board is an opportunity to complement the small and medium businesses' skills at a lower cost of that of employing a consultant.

Research Method

The nature of the research question and problem statement suggest an exploratory study, which, as Mouton (1996:103) argues, attempts to gather new data and "facts" and to establish whether there are interesting or novel patterns in the data. For the fact that qualitative methods are generally used for exploratory research – in particular when the research activities attempt to identify, describe and generate explanations for phenomena (Crabtree & Miller (1992:6) as is the case in this study, a qualitative design was chosen. Moreover, the choice of a qualitative design is generally considered appropriate when little previous research has been conducted in the subject domain (cf. Mouton, 1996:102 - 103).

The ontological platform for the study is indicated by the study's point of departure namely how SME's – and in particular SME owner-managers – experience and undertake strategic

exercises within their businesses The study will focus on (investigate) the experience of individual SME owner-managers and thus work at the level of individual feelings, attitudes, beliefs, views, and understandings of strategy and strategic management. This is done through direct observation, in order to understand how people create and maintain their social worlds. This will be affected by employing Grounded Theory as research strategy. From an epistemological perspective it follows that first hand accounts (e.g. verbatim narratives) of how the concept of strategy is engaged, and obtained directly from those who experienced it, will be most suited as a vehicle of knowledge.

The *research population* for the study comprised owner-managers of all SME's in Gauteng. As with most qualitative studies, non-probability sampling was employed in this study – in particular as representativity in terms of the population, is not a consideration. Purposive sampling will be employed and a sample size of 12 owner-managers will be selected to act as research subjects for this study.

Research sample

A total of 12 small and medium enterprises were targeted to participate in this research. Consistent with a modernist value-framework, open-ended, semi-structured interview techniques were use for *data gathering* (cf. Denzin & Lincoln, 2005). Qualitative content analysis was employed to analyse the data. This entails deriving dimensions (or broad categories) from literature and using this as a framework against which data resultant from a specific context is analysed.

Findings from the research

Categories are considered the labels used to re-arrange data and will provide an emergent structure which is relevant to the research to analyse data further. The research categories are listed below:

The need for strategy for small and medium enterprises

Strategy formation role-players in the small and medium enterprise

Planning and forecasting for small and medium enterprises

Competitive intelligence for small and medium enterprises

The use of consultants for small and medium enterprises

The use of consultants for strategy formation for small and medium enterprises

The small and medium enterprise strategy formation process

The link between strategy and small and medium enterprise performance

The use of strategy for corporates versus small and medium enterprises

In this study the following referencing system was used to code the research participants:

- RP1

This research participant was established just one year ago yet already has obtained contracts with large customers. This enterprise does contract cleaning, specialising in the hospitality and healthcare industries. The business owner claims that this small and medium enterprise is unique as it gives ownership to all levels of the business including the cleaners to provide a platform for empowerment.

- RP2

RP2 was created out of the need for consulting services resulting from legislation introduced pertaining to broad-based black economic empowerment (B-BBEE). The business started from just consulting services, and quickly grew to include a call centre and an electronic platform that enables enterprises to undertake a self assessment of their B-BBEE status. The employee base is kept small by contracting consultants (of which there are 14) on a work for fee basis. Similarly the call centre is contracted on an output basis.

- RP3

This enterprise was established in 2004 following the owner's sale of a previous business to Bidvest. RP3 is a provider of linen to the private healthcare sector. The items provided include amongst others flat sheets, pillow cases, patient gowns and doctor scrub suites. The key objective of this enterprise is to provide quality linen at lower prices but higher volumes to established organisations.

- RP4

RP4 was established 20 years ago through the merger of two smaller businesses. One partner came from a sales background and the other from a technical background. The main focus of this small and medium enterprise started in consulting for telephony and telephone infrastructure, but grew to include Information Technology (IT) as technology evolved. This research participant employs 18 staff members and generates income through either an hourly consulting fee, a fee per project or even from commission earned from suppliers as allowed by their customers.

- RP5

This enterprise was established 11 years ago when it was purchased by a larger enterprise to add to the laundry division of a top Johannesburg Stock Exchange (JSE) listed company. It is the only off-premise laundry division within the group. The original focus of RP5 was within the healthcare sector where it started with onsite laundries within various hospitals

and has since grown to include customers in the hospitality sectors and even industrial sectors such as mining and manufacturing.

- RP6

RP6 does silk-screening, litho printing and labels which started 15 years ago in the home of the business owner. The cheapest machine for printing was a label printer, and due to financial constraints was the only option for the business owner to pursue. Even though the annual turnover of the business is R18 million, this small and medium enterprise has no contracts with any of its customers. There are 26 full time employees who according to the business owner are remunerated well above the average wage rates to improve output.

- RP7

This enterprise started in 1997 in Cape Town as a supplier of computers only, but evolved to focus on the supply of printers, printer consumables and printer maintenance. In 1999 the second branch was opened in Gauteng followed by branches in Durban in 2001 and George in 2004. This research participant now also has 17 dealerships that support the four branches, allowing it to service larger national customers.

- RP8

RP8 is a franchised organisation whose core business is in cleaning and pest control services. Operational for over 30 years already, the business systems are described as refined and include sales and marketing, administration, finance and customer care support to its 35 franchisees across South Africa. The two business owners hold different skills, one being in sales and marketing, the other in finance and administration. The franchisees range from two members to up to 30 members per franchisee. Revenue generated for franchising services is five percent for cleaning and ten percent for pest control.

- RP9

Following retrenchment from a previous employer in 2001, six directors found this enterprise which is an electronic development agency who consults on electronic channels. Although now only three of the original directors remain, there are additional four full time employees and 25 contract staff who are used on a project basis. The key services include building and designing websites and advertising campaigns with a second offering being the marketing of channels via electronic initiatives such as e-mails, banners, Google etc.

- RP10

This is a relatively new enterprise started three years ago when the founder went on a trip to the Caribbean and identified a product to import to South Africa. This is the smallest of all the participants with R1.4 million turnover annually and two employees – the owner and his wife. Previously distributors and representatives were used to market the product but due to complications this was discontinued. RP10 imports hand sanitizers, soap and degreasers.

- RP11

In 2006, this enterprise was established following the business owners wish to leave her job and to start her own business. RP11 supplies computer consumables and hardware and ensures presale, sale and after sale services are of a high standard to ensure repeat business. With minimal staff this business does an annual turnover of up to R12 million.

- RP12

This enterprise was established 12 years ago as a manufacturer of specialised products for metal and water treatment. Subsequently new opportunities in the market such as household and sanitation products as well as industrial cleaning evolved to grow the business to a R23 million per annum turnover. RP12 has even entered a niche market of solving problems such as cleaning bank notes, and are often contacted to create new products for unique situations. The business was found by two partners, both chemical engineers, and now employs 52 staff members.

The annual turnover for each respective research participant was a critical requirement for participating in the research. All the participants met the requirements of the National Small Business Act to be classified as small and medium enterprises. The combined annual turnover of all the research participants was R168 million, with the average turnover for all research participants being R14 million per annum. Notably, the newest participant (RP1) had the highest turnover for their first financial year. The lowest annual turnover was reported for RP10, who could also be classified as a micro enterprise. Although most enterprises reported significant year on year increases in turnover, there was no direct correlation between the number of years in operation and the annual turnover of the small and medium enterprises.

The years in operation of the research sample varied from as much as 30 years to as little as one year. In total, the small and medium enterprises had 125 years of experience which on average was 10.4 years per enterprise.

A diverse range of business types were included in the research sample. There was also a diverse range of business models, ranging from the simplistic supply of goods (RP3, RP6, RP10, RP11) to the supply of services (RP1, RP2, RP9,) to the supply of goods and services (RP4, RP5, RP7, RP8 and RP12). Table 1 provides a more detailed breakdown for all research participants.

Table 1: Business type classification

Supply of goods	Supply of services	Supply of goods and services
RP3 – Linen products for healthcare industry	RP1 – Contract cleaning services to healthcare and hospitality industry	RP4 – Consulting services and hardware and software for telecommunications.
RP6 – Litho and screen-printed labels to retail industry.	RP2 – Broad Based Black Economic Empowerment consulting services	RP5 – In-house laundering services including provision of equipment and servicing of equipment.
RP10 – Touch-less hand sanitizer units and consumables.	RP9 – Provider of web designs and electronic channels.	RP7 – Printer hardware and consumables and maintenance services.
RP11 – Computer hardware, software and consumables.		RP8 – Cleaning and pest control services including provision of equipment and consumables
		RP12 – Cleaning chemicals and product design services.

A diverse range of industries were included in the sample from related industries such as cleaning services (RP1, RP8) and cleaning consumables (RP10, RP12), linen products (RP3) and laundering thereof (RP5), to others who had no relation to any of the other participants such as B-BBEE consulting services (RP2), telecommunication consulting, hardware and software (RP4) or web design (RP9).

Within the research sample there was vast diversity in the ownership structures of the enterprises across all participants. These ranged from single ownership (RP3, RP6, RP10 and RP11) ownership by more than one person (RP2, RP4, RP7, RP8, RP9, and RP12) ownership by a listed enterprise (RP5) and even a more complicated ownership structure (RP1), according to which ownership flows down to the lowest levels of the enterprise to allow for empowerment. Once again, the participant with the highest turnover (and also the newest enterprise), had the most unique ownership structure (RP1).

The need for strategy for small and medium enterprises

From the discussions held with the research participants, the mainstream thinking in respect of the need for strategy for small and medium enterprises was mostly in support thereof. Where there was no support for the need for strategy for small and medium enterprises, it

was not ascribed to a disbelief in the value of strategy overall, but rather the appropriateness of such to small and medium enterprises.

Strategy formation role-players in the small and medium enterprise

Once the views of the research participants regards the need for strategy for small and medium enterprises was established, the next research category was formed to then specifically determine whom the research participants thought should be involved in the formation of strategy for the small and medium enterprise.

Planning and forecasting for small and medium enterprises

The business type classification of the research participants ranged from suppliers of goods, suppliers of services and suppliers of goods and services. These business type classifications could be considered to have an influence on the extent of their planning and forecasting. All of the research participants gave feedback to this research category.

The statements indicate that there were varying intensities of planning and forecasting undertaken by the research participants. This was evident from the varying period in advance for which planning and forecasting was done, the role players involved in the planning and forecasting as well as the extent to which the planning and forecasting was done by the research participants.

Competitive intelligence for small and medium enterprises

It was interesting to note that when discussing competitive intelligence gathered by the research participants, that they discussed not only what type of competitive intelligence they gather, but also the sources of that competitive intelligence. Only a few of the research participants discussed why gathering competitive intelligence was important to their small and medium enterprise.

The use of consultants for strategy formation for small and medium enterprises

Some verbatim responses from the research participants are listed below regards the use of consultants for strategy formation for small and medium enterprises. Four of the research participants did not have any comment regards the use of consultants for strategy formation for small and medium enterprises.

The use of consultants for strategy formation for small and medium enterprises

Some verbatim responses from the research participants are listed below regards the use of consultants for strategy formation for small and medium enterprises. Four of the research

participants did not have any comment regards the use of consultants for strategy formation for small and medium enterprises.

The small and medium enterprise strategy formation process

Various responses from the research participants in response to the small and medium enterprise strategy formation process are listed below. A lot of terminology was often intermingled in this research category. Research participants spoke of strategy by referring to their mission or vision or even interchanged the concept of strategy with financial plans or goals and objectives.

The link between strategy and small and medium enterprise performance

Seven research participants (RP1, RP2, RP5, RP7, RP9, RP10, RP12) provided responses in respect of their view on the link between strategy and the performance of the small and medium enterprise. Their responses reveal that in many cases their responses held no reference to the research topic.

The use of strategy for corporates versus small and medium enterprises

Half of the research participants shared their views regards the use of strategy for corporate versus small and medium enterprises.

The research conclusions based on the findings resultant of the research:

Conclusions should be verified according to Miles and Huberman (1994:11). This verification can range from extensive and elaborate processes, to momentary recollections by the researcher with a simple reference back to field notes.. Conclusions in qualitative data must be valid, repeatable and accurate.

The need for strategy for small and medium enterprises

There was overwhelming support by the small and medium enterprise research participants in favour of the need for strategy for small and medium enterprises.

The majority of participants were in favour of, and supported the notion of having a strategy for small and medium enterprises (RP1, RP2, RP3, RP5, RP7, RP8, RP9, RP10, RP12). However, after further discussion in the interviews this was contradicted in respect of what the definition of strategy is according to these research participants, and furthermore, what the reality of strategy is in their business.

There were two research participants that were not supportive of the need for strategy for small and medium enterprises (RP4, RP11). RP4's unfavourable response to the need for strategy for small and medium enterprises in 4.5.1 was contradicted later in the interview when discussing the strategy formation process. This research participant reflected that the two business owners were in need of giving more thought to the strategy of their business. Furthermore, he also noted that strategic discussions were held between the two business owners and other senior managers within the small and medium enterprise. Similarly, RP6 stated early in the interview that a strategy is done on a monthly basis. Yet when defining the activities associated to the monthly strategy, these were simply the compilation of standard financial monthly reports such as a monthly balance sheet and a profit and loss statement.

The concerns of Dibrell *et al* (2007:23) regards small and medium enterprises becoming disconnected from their operations if they become too involved in a structured planning process are also only supported in the response from RP4. RP4 held the amount of time needed for strategy as a disadvantage to corporates. This view of Dibrell *et al* (2007:23) will be more distinctly supported in the conclusions of other research categories where variables of this research category will be identified.

The research could not prove to support or contradict Sandberg *et al*'s (2001:13) findings that half of all small and medium enterprises have no strategy as the participants were not directly questioned if they have a strategy or not. However, based on the verbatim statements it is evident that 75 percent of participants strongly supported the need for a strategy.

Strategy formation role-players in the small and medium enterprise

Singular owned small and medium enterprises mostly (with the exception of RP11) reported that they (the owners) were the only participants involved in the formation of strategy. Small and medium enterprises with multiple owners however had multiple role-players in the formation of their strategy.

The responses to the feedback in respect of whom the participants thought should be involved in the strategy formation process is therefore also compared with their respective ownership structures. In respect of all the singular owned small and medium enterprises (RP3, RP6, RP10) the responses indicated that as the sole owners of the small and medium enterprises that they were the only participants involved in the formation of the strategy. It is important to note that this must be considered in respect of their individual definitions of a strategy and not the formal definition of a strategy. RP11 had no response in respect of who

the role-players in the formation of strategy for small and medium enterprises should be, simply because it did not believe in running the business on a strategy.

The responses of the research participants who had multiple owners (RP2, RP4, RP7, RP8, RP9, RP12) were varied in respect of whom the role-players in the formation of strategy for small and medium enterprises should be. Some research participants referred only to the owners (or partners) of the small and medium enterprises being involved (RP2, RP7, RP9). RP4 referred to many role-players being involved in the strategy formation process. This included the owners, senior management and even strategic business partners such as their suppliers. The response from RP4 must be considered in respect of the non-favourable view of strategy for small and medium enterprises. RP8 also recommended using as many role-players as possible and also referred to an internal strategy committee which is made up of the directors, field managers and a selection of franchisees. RP12 held that although top management should be responsible for the formation of the strategy of the small and medium enterprise, that this should be based on the feedback obtained from lower levels of management.

RP1 has a multi-layered ownership structure and responded that management should be involved in the formation of the small and medium enterprises strategy. However, the description of “management” was not explored and it is not known what level of management (i.e. senior, middle, junior) was being referred to. RP5 is owned by a listed organisation (Bidserv). RP5 referred to two levels of strategy. The first level of strategy was at the level of the listed organisation (i.e. the combined strategy of the divisions within the organisation) and the second strategy was at the business unit level (i.e. that of RP5 alone). In respect of the role-players involved in their strategy formation at business unit level, all unit managers were involved in the process. RP5 placed a lot of emphasis on participation being important in the strategy formation process.

With the exception of RP4 when referring to strategic partners such as suppliers being involved in the strategy formation process, all other references to role-players were internal role-players only. None of the research participants made reference to consultants as role-players for strategy formation.

Planning and forecasting for small and medium enterprises

Planning and forecasting was referred to only in financial terms by most of the research participants.

Research participants advised that forecasts were being used to determine the growth of the small and medium enterprise and to measure if they were on track for their future. Some referred to forecasting in only financial terms e.g. sales, cash flow or revenue growth (RP1, RP2, RP4, RP5, RP6, RP7, RP8, RP10, RP11), whilst others included reference to forecasting in terms of products (RP3, RP12) and organisational structure (RP9). Although RP6 did refer to forecasting in financial terms, this was not done in practice as previous experience was not successful and therefore discontinued.

In addition to the two research participants who advised that they undertook no forecasting (RP6 and RP11 who only looked retrospectively at deals completed for the preceding month), one other participant indicated reluctance to do so. RP4 honestly reported that they only undertook forecasts for the sake of their suppliers, who required quarterly forecasts for their planning. In fact, they preferred not doing forecasts, as the time spent on doing forecasts would be better served generating income for their business.

One research participant (RP9) referred to their forecasting in terms of their “Bahamas spreadsheet”. This being the focus on cash flow which ultimately determined how much money is in the bank (the specific reference to the Bahamas was used as an indication of when they would have enough cash flow to afford to retire in the Bahamas). Cash flow was also the only reference to forecasting made by RP10. Cash flow determines their ability to place new orders, which ultimately is the focus of all planning for their enterprise.

Although RP12 did not spend as much time on forecasting, they used forecasting for the most strategic purpose of all the research participants. Their forecasts included margins on turnover sales of inventory or services for cash or on credit (Marx, 2004:183), forecasts on overheads to determine profit, (revenue exceeding total cost excluding taxes (Marx, 2004:181) nett profit, (revenue exceeding total costs including taxes (Marx, 2004:179) and forecasts on margin on gross profits (contribution of core business after covering operating expenses (Marx, 2004:176). These financial calculations were then used to determine if the market is ready for a price increase. The most contrasting response to the latter regards the use of planning and forecasts was from RP6 who reported that they have no targets and didn’t do any budgeting (this being an enterprise whose annual turnover is R18 million per year. They prefer to go “day by day” and simply “play around with numbers”.

Research done by Stonehouse and Pemberton (2002:885) reported that small and medium enterprises from the service sector had more structured plans than those from the manufacturing sector. Both the above examples of structured and comprehensive planning

and forecasting undertaken by research participants (RP5 and RP12) are suppliers of goods and services. Two of the weakest examples of planning and forecasting identified from all the research participants were from RP6 and RP11 who both supply only goods. However RP11 does not specifically manufacture the goods, and therefore cannot be classified as from the manufacturing sector.

A second conclusion in this research category can be made from the findings of the research.

None of the research participants did planning and forecasting beyond 12 months in advance.

Although almost half of the research participants did forecasting for 12 months, none of the research participants did longer term forecasting. As most organisational strategies look beyond a one year period, this response must be considered in respect of other responses of the research participants in this research in respect of their strategy formation process.

In some cases, forecasting was done exclusively by the owners of the enterprise, compared to other research participants who reported that forecasting was done from the bottom up. This involved budgets being compiled by sales staff, rolled up to the sales manager and then into a “global budget” for the full enterprise. In this particular reference (RP7), the research participant reported that forecasts done from the bottom up allow for greater participation within the organisation.

Forecast reliability varied by the research participants. Many research participants reporting that the increased growth of the enterprise made it harder to accurately forecast. RP7 reported that it was difficult to determine a pattern in the current market circumstances. RP1, who is a relatively new small and medium enterprise also reported difficulty in forecasting accuracy as associated to a new business with no history as reference.

Competitive intelligence for small and medium enterprises

Competitive intelligence was gathered by most research participants and most commonly this was in respect of competitor pricing and offering (product and/or service).

One research participant did not gather any competitive intelligence (R6). All other research participants gathered competitive intelligence and this ranged from pricing, product or service offering to who their customers are and even what their value proposition is. Although most research participants interviewed actively seek competitive intelligence, none

made specific reference of how the competitive intelligence impacted their strategies. The types of competitive intelligence gathered by the research participants are listed in Table 2 below.

Table 2: Types of competitive intelligence gathered

Participant	Reason for gathering competitive intelligence			
	Pricing	Offering	Other	None
RP1			Who their customers are	
RP2	Pricing	Structure of services	General approaches	
RP3	Pricing	Service offering	Strategy, lead times, general approach	
RP4		Service offering		

Eight research participants gathered competitive intelligence relative to pricing (RP2, RP3, RP5, RP8, RP9, RP10, RP11, RP12). Seven research participants also gathered competitive intelligence pertaining to either the products or services that their competitors provided (RP2, RP3, RP4, RP7, RP8, RP9, RP12). However there were certain research participants that gathered competitive intelligence at a higher level than just simply pricing or service/product offerings. Two research participant (RP2 and RP3) specifically gathered competitive intelligence on the overall approaches of their competitors. RP12 gathered competitive intelligence to determine the business potential of their competitors. RP9 also referred to gathering competitive intelligence to establish the value propositions of their competitors. This suggests that although they also wanted to know the prices of their competitors that they also wanted a more in-depth knowledge of how their competitors operated and where they fitted into the market. This in lieu of just a simple price benchmarking exercise as indicated by most participants.

The two most common sources for competitive intelligence gathered by the research participants were from their customers and their suppliers. The research participants gathered competitive intelligence from various sources. The most common source of competitive intelligence was information gathered from their customers (RP2, RP5, RP12). The next most common source was information gathered from their suppliers (RP1, RP4, RP11). Other sources of competitive intelligence included:

Previous employment at competitor organisations (RP1); employment of staff members from competitor organisations (RP9); membership to industry association (RP1, RP2, RP8); attendance of industry conferences or seminars (RP4, RP8); information gathered by

franchisors in the field (RP8); trade publications (RP8); review of competitors websites (RP9); surveys undertaken with customers of competitors (RP12).

The use of consultants for small and medium enterprises

All the research participants consulted external service providers for the provision of services. Almost all of the research participants consulted external parties for financial services.

The research participants employed the services of 15 different types of external service providers. These were categorised into financial, legal, human resource, information technology and other. Table 3 gives an overview of various external stakeholders consulted by the research participants.

Table 3: External parties consulted

Participant	Financial	Legal	Human resource	Information technology	Other
RP1	Accountant	Lawyer			B-BBEE consultant
RP2	Tax advisor				Brand specialist
RP3	Accountant	Lawyer			Product specialist
RP4	Accountant	Lawyer	Labour consultant	Website designer	Suppliers
RP5			Industrial relations specialist	Information technology specialist	
RP6	Accountant	Lawyer			
RP7	Accountant	Lawyer			
RP8	Accountant	Lawyer		Information technology specialist	Administration specialist. franchise specialist
RP9	Accountant	Lawyer			
RP10	Auditors				
RP11	Accountant	Lawyer			Suppliers
RP12	Accountant			Information technology developer	Process developer
Total	11	8	2	4	8

% of usage by participants	92%	67%	17%	33%	67%
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A total of 33 consultants were used by the research participants, signifying an average of 2.75 per research participant. All participants barring one (RP5) engaged with external parties for assistance in financial matters. This is mostly ascribed to tax and other legislated requirements for small and medium enterprises. Legal advice was obtained by eight participants and reasons for approaching these parties included for assistance in managing bad debt, registering company names and setting up partnerships. Labour consultants were used by two participants, both of whom supply both goods and services. Notably participants with larger labour quotas did not make use of labour consultants. The participants used information technology external parties for various purposes ranging from setting up infrastructure to designing websites. None of the research participants ever used the services of consultants for any purposes associated to strategy formation or any tasks associated to the strategy of their small and medium enterprises.

Bennet and Robson (1999:352) advise that the need for external assistance in the form of advice from consultants increases as the enterprise grows. Although small and medium enterprises are more likely to need specialist advice, they are less likely to seek it. Dyer and Ross (2008:133) also assert that small and medium enterprises prefer their own experience and intuition. The findings of Dyer and Ross (2008:133) reflect the findings of this research insofar as small and medium enterprises being most likely to seek external advice on technical issues such as legal or financial matters.

According to Bennett and Robson (1999:352), the lower the annual turnover of the small and medium enterprise, the less likely they are to seeking the services of consultants. The feedback from the research participants does not support the information accounted by Bennett and Robson (1999:352). The research participants (RP4 and RP8) who made use of the most consultants (five) both had an annual turnover of R15 million each. This value is within the median range of annual turnover of the total research population calculated as R14 million. The research participants with the highest turnovers (RP1 with R24 million and RP12 with R23 million) both only employed the services of three consultants each, which is close to the average number of consultants used throughout the entire research population. The only correlation from the findings of Bennet and Robson (1999:352) was established from the research participants with the lowest turnover. RP10 who had the lowest annual turnover (R1.4 million) only employed the services of one consultant. The next 3 lowest

annual turnover research participants (RP2, RP7 and RP9 respectively) all only employed only two consultants.

Bennet and Robson (2003:797) later reported that owner-managed enterprises are less willing to employ consultants. Ten of the 12 research participants were owner-managed. Six of these small and medium enterprises had multiple owners and four were managed by single owners. The exceptions to these ownership structures were RP1 who had multiple levels of ownership and RP5 who was part of a listed enterprise. RP1 only employed one consultant, and RP5 employed two.

The use of consultants for strategy formation for small and medium enterprises

None of the research participants had ever employed the services of consultants for the provision of strategy formation consulting services.

Although nine of the research participants were in favour of the need for strategy for the small and medium enterprise, none had employed the services of consultants to assist in the formation of their strategies. Thus the findings of Pineda, Lerner, Miller and Phillips (1998:70) are not refuted in the findings of this research. Their research showed that small and medium enterprises turn to internal sources of advice as opposed to external sources. Although their research did not make reference to advice specifically regards strategy, it did show that small and medium enterprises seek external advice when making decisions related to their products, but are less likely to do so when seeking advice regards technical decisions.

The research participants held diverse views in respect of willingness toward employing consultants for the formation of their strategy.

Four research participants (RP3, RP5, RP10, RP12) did not offer a response to whether they would be willing to employ the services of consultants for the formation of their strategy. Only one research participant was fully in favour of employing the services of a consultant for the formation of their strategy (RP2). Three research participants were in favour of employing a consultant for the formation of their strategy (RP4, RP8, RP9), but were hesitant due to the associated cost and time required.

Four research participants (RP1, RP6, RP7, RP11) were not in favour of employing consultants for the formation of their strategies. Two of these responses affirmed that the experience of the owners of the small and medium enterprise could not be improved through

the use of consultants (RP6 and RP11). In reference to their own experiences as small and medium enterprise owners, RP6 had been in operation for 15 years and RP11 had been in operation for three years. RP7's disapproving response was based on previous experience working with consultants in a corporate organisation, however it was not confirmed if the consultants referred (if even specific or just a general overview of all consultants engaged) were employed for the purpose of strategy formation.

If the conditions (pricing and time availability) stipulated by RP4, RP8 and RP9 were removed, there would be an equal amount of participants in favour and not in favour of employing consultants for the formation of strategy

Bennet and Robson (2003:797) argue that small and medium enterprises can improve their competitive position by augmenting their strategic and information expertise, and suggest that consultants are used to facilitate this. They do offer alternate methods for expanding the expertise of the small and medium enterprise which include recruiting a specialist employee; internal management training and development and strategic collaboration with another enterprise. Of the three alternate methods suggested, only management training and development was used by the research participants. RP10 and RP12 both referred to attending strategy training courses. A further method, not mentioned by Bennet and Robson (2003:797) of expanding expertise on strategy was noted by RP8, RP10 and RP12, who all spoke of reading books about strategy.

The small and medium enterprise strategy formation process

None of the research participants made reference to a formal process in respect of their strategy formation.

None of the research participants described how they formed their strategies, and even interchanged the concept of strategy with business plans (RP7), long term goals and objectives (RP1), short and medium term objectives (RP10) and annual projections (RP2). Furthermore, no references were made by any of the research participants to the use of any models or methodologies for the purpose of strategy formation. [Refer to the models identified by Pun, (2004:918) in diagram 2.1].

None of the research participants had documented strategies including a mission and vision developed independently.

The responses of the research participants in regards their approaches toward strategy formation are summarised in Table 4 below. The table is used to firstly separate the responses in respect of the existence of an enterprise strategy and the existence of an enterprise mission and vision. These sections were then further examined to describe if the research participant had such in place and was documented, had such in place but was not documented or did not have such in place at all.

Table 4: Summary of strategy status

Participant	Exists and documented		Exists but not documented		Does not exist	
	Strategy	Mission and vision	Strategy	Mission and vision	Strategy	Mission and vision
RP1					X	X
RP2	X					X
RP3			X	X		
RP4				X	X	
RP5	X	X				
RP6				X	X	
RP7		X	X			
RP8		X	X			
RP9	X					X
RP10		X			X	
RP11				X	X	
RP12			X			X

The findings of this exercise indicated that there was a large assortment of outcomes. Three research participants had documented strategies in place (RP2, RP5, RP9). RP5's strategy was formed annually and was aligned to that of their holding company's overall strategy. RP5 also confirmed that their mission and vision was documented. Mission and vision statements are mostly included in the overall strategy, but for the purpose of evaluating the understanding of the content of a strategy, the reference to mission and vision statements was separated. RP9 advised that their strategy was limited to a one page document. Notably, although RP9 reported they had a documented strategy, their mission and vision was not included in the strategy as they reported that they did not have a mission or vision.

Three research participants had documented mission and vision statements, but no documented strategies (RP7, RP8). RP10 had a documented mission and vision statement, yet had no strategy at all. The three research participants (RP4, RP6, RP11) who earlier indicated either indifference or resistance to the need for strategy for small and medium enterprises, all had the same results i.e. although they had mission and vision statements, these were not documented. Furthermore they had no strategy at all. Thus, their responses in were consistent with their responses in respect of the existence of strategies in their enterprises.

The research participant with the most extreme response whereby there was no existence of either a strategy nor mission and vision statements was RP1. It must be noted however, that RP1 did specify that there were goals and objectives in place, but this cannot be equated to a strategy.

Five research participants summarised the overall strategy of their small and medium enterprises indicating that they had considered strategy content. These are summarised below:

RP1 growth to be on a national level,

RP4 increased annuity income,

RP6 outperforming the competition,

RP7 increased turnover,

RP11 growth.

The link between strategy and small and medium enterprise performance

No conclusion can be formed from the responses to this research category. Seven of the research participants gave feedback in respect of the link between strategy and the performance of the small and medium enterprise. Furthermore there were many vague responses that detracted from the key concepts raised. These included comparison of the link between strategy and the performance of the individual employed in the small and medium enterprise, or comparisons to the link between the strategy and the performance of the industry in which the small and medium enterprise operates.

RP12 responded that strategy must be linked to performance. This response however does not reflect if the research participant believed if there is a link between the strategy and the performance of the small and medium enterprise. RP1 said that strategy determines the future growth or failure of the business. This can be interpreted to support the belief that there is a link between strategy and the small and medium enterprises' performance. RP7

asserted that strategy sets the direction of a company and believed that there is a link between strategy and performance. RP10 reflected that performance is linked to strategy. But went on to add that there are linkages between the strategy of the small and medium enterprise and the performance of the industry in which it operates. In a similar fashion RP5 spoke of the importance of linking the strategy to the performance of the individual, but did not make reference to the link between strategy and the performance of the small and medium enterprise. The most perplexing response was from RP9. The response given had no bearing to the research category, and referred to issues discussed in other research categories.

The use of strategy for corporate versus small and medium enterprises

A considerable conclusion can not be formed in response to this research category. Six research participants offered an opinion to this research category. Of the six responses of the research participants, three (RP1, RP2, RP12) thought that there should be no difference in the way strategy is approached by corporate versus small and medium enterprises and three research participants (RP4, RP7, RP10) did not believe that corporate and small and medium enterprises should approach strategy in the same way. RP2 further clarified her view to specify that although there should not be a difference, that there is a difference in practice. RP2 also stated that in small and medium enterprises the operations of the business form part of the strategy, which is not the case in corporate.

The views held by O'Regan and Ghobadian (2004b:77) are closely reflected by the response from RP4 who believed that corporate firms are disadvantaged by the amount of time needed to form strategies. RP7 said that people at the "coalface" (forefront) of the business know the needs of the business and therefore would be better at strategy formation than corporate. Although not directly stated, the inference was made that senior staff who typically are responsible for the formation of the strategy at corporate do not typically have access to such information, and therefore would be disadvantaged in the strategy formation process. RP10 boldly stated that corporate only undertake the strategy formation process to have something to file in a drawer. Yet was adamant that small and medium enterprises should have a practical strategy, but also felt that these were too costly for the small and medium enterprise to form and implement.

Implications for managers

Although there was strong support in favour of the need for strategy for small and medium enterprises by the research participants, this support failed to translate in real life practices undertaken. Examples include the limited forecasting and planning done by the research

participants, as well as the narrow-based competitive intelligence they gathered. The favourable support of strategy for small and medium enterprises also did not translate in respect of the external consultants used by the small and medium enterprise research participants, none of whom were appointed for the purpose of strategy formation. Similarly, the extent to which the research participants formalised their strategy formation process did not correspond with their support of strategies for small and medium enterprises.

In respect of the use of consultants for the formation of the small and medium enterprises' strategy showed there was division in the responses received from the research participants. The implication is that there is differing perceptions of the value of consultants for strategy formation.

None of the research participants had engaged formal strategy formation processes and that there was no evidence of documented strategies. Future research can be used to identify small and medium enterprises that have formal documented strategies and compare their performance to small and medium enterprises with no formal documented strategies.

Limitations and recommendation for future research

A potential **limitation** of the research is the likelihood of senior executives of small and medium business revealing the detail of their strategy formation practices - particularly if these are not part of a formal process. As well as the restriction research participants apply in terms of revealing their existing strategic processes.

The implication that small and medium enterprises aspire for formal strategies yet (for reasons not distinctly explored in this research) such do not exist. This further implies that there is a need to assist small and medium enterprises in the strategy formation process. Therefore a recommendation for future research is to explore alternate mechanisms or channels for small and medium enterprises to form their strategies.

Research participants in favour of the use of consultants for strategy formation had reservations in respect of potential cost and time requirements associated with appointing strategy consultants. Future research could be used to either disqualify or accredit these perceptions.

Conclusion

The research conclusions established that none of the research participants had ever employed the services of external consultants for the purpose of strategy formation.

Although the literature review emphasised the need for strategy for small and medium enterprises, the research findings indicated that for the most part, none of the research participants undertook a formal approach to strategy formation. Therefore two of the critical components of the research question i.e. the use of external consultants and the strategy formation process were distinctly absent.

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SOUTH AFRICAN BUSINESSES: ONE STEP CLOSER TO BECOMING ENTREPRENEURIAL

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ABSTRACT

Corporate entrepreneurship is recognized as a potentially viable means of promoting and sustaining competitiveness and transforming businesses and industries into opportunities for value creating innovation. The purpose of this study was to make use of a corporate entrepreneurial assessment instrument that can be used to assess the corporate entrepreneurial levels in South African businesses in an attempt to becoming more entrepreneurial. The research is designed as a formal study. The target population is employees in five South African businesses. Data was collected through a self-administered questionnaire. The data was analysed following various techniques, such as frequency distribution, item analysis, factor analysis, chi-square test, ANOVA and t-tests. The study contributes to the empirical studies in the field of Corporate entrepreneurship and proves that internationally developed instruments can be applied in a South African context. The study path the way for South African businesses to become more entrepreneurial.

INTRODUCTION

The global economy is creating profound and substantial changes for businesses and industries throughout the world. These changes make it necessary for businesses to examine their purpose carefully and to devote a great deal of attention to selecting and following strategies in their pursuit of the levels of success that have a high probability of satisfying multiple stakeholders. Johnson (2001) states that many people in large businesses believe that once a business reaches a certain size, it unavoidably loses its capacity to act entrepreneurially and to stimulate and foster innovation. According to Christensen (2004) businesses have been faced with increasing demands for both faster product development and more features in smaller products, and higher and uniform quality, stability and lower prices, despite the inherent incompatibility of such demands.

Christensen (2004) indicates that many large businesses find it difficult to integrate the entrepreneurial spirit in a well-structured or bureaucratic business. Therefore these businesses must think non-traditionally to cope with the increasing paradoxes. According to Johnson (2001), if a business does not adopt a proactive attitude towards innovation and the creation of new ventures, it is unlikely to survive in an increasingly aggressive, competitive and dynamic market place. Businesses are turning to corporate entrepreneurship because they are not experiencing the continual innovation, growth and value creation that they once had (Thornberry, 2001). The purpose of this study is to assess how South African Businesses can become more entrepreneurial.

PROBLEM INVESTIGATED

Various researchers (which will be highlighted in the literature review) stated that to develop and nurture businesses current and future competitive advantages, advantages that are grounded in innovation, businesses increasingly rely on corporate entrepreneurship. Corporate entrepreneurship represents the framework for the facilitation of ongoing change and innovation in established businesses (Morris and Kuratko, 2002). There is a significant amount of written consensus regarding corporate entrepreneurship as a means for promoting and sustaining global corporate competitiveness and economic growth. This consensus focuses mainly on international businesses and not on businesses in South Africa. The management dilemma that then exists (particularly in South Africa) is how to foster and implement corporate entrepreneurship in businesses and/or industries to sustain this competitive advantage and improve performance.

Limited empirical research is available on corporate entrepreneurship in South Africa. No formal study has been conducted in South Africa where the Health Audit of Ireland, *et al.*

(2006) has been used. A few research studies did make use of the Entrepreneurial Performance Index and the Corporate Entrepreneurship Assessment Instrument individually.

The purpose of the study is to make use of a corporate entrepreneurial assessment instrument, the Health Audit Instrument developed by Ireland, *et al.* (2006a) to assess the corporate entrepreneurial and innovative levels in South African businesses. This study will also inform and provide proof to other South African businesses the value of assessing their businesses in terms of their corporate entrepreneurial and innovative mindset which could assist in sustaining a competitive advantage.

RESEARCH OBJECTIVES

The primary objective of this research is to assess corporate entrepreneurial and innovative levels in South African businesses.

In order to achieve this primary objective, various secondary objectives are formulated. The secondary objectives of the study are:

To determine by means of a literature study:

- the importance and value of corporate entrepreneurship;
- how to foster, develop and implement corporate entrepreneurship; and

To determine by means of empirical research:

- how to assess corporate entrepreneurial and innovative levels in South African businesses, by means of a corporate entrepreneurial health audit instrument.

HYPOTHESES

The following hypotheses were formulated for this study:

Ho1: The **degree of entrepreneurship** is not high in South African businesses.

Ho2: The **frequency of entrepreneurship** is not high in South African businesses.

Ho3: The **entrepreneurial intensity** of South African businesses is not high.

Ho4: There is no statistical significant difference between the corporate entrepreneurship opinions of the **managers and employees** in South African businesses regarding the corporate entrepreneurship construct: **managerial support**.

Ho5: There is no statistical significant difference between the corporate entrepreneurship opinions of the **managers and employees** in South African businesses regarding the corporate entrepreneurship construct: **work discretion**.

Ho6: There is no statistical significant difference between the corporate entrepreneurship opinions of the **managers and employees** in South African businesses regarding the corporate entrepreneurship construct: **rewards/ reinforcement**.

Ho7: There is no statistical significant difference between the corporate entrepreneurship opinions of the **managers and employees** in South African businesses regarding the corporate entrepreneurship construct: **time availability**.

Ho8: There is no statistical significant difference between the corporate entrepreneurship opinions of the **managers and employees** in South African businesses regarding the corporate entrepreneurship construct: **organisational boundaries**.

Ho9: There is no need for a **corporate entrepreneurship development programme** in South Africa businesses.

LITERATURE REVIEW

The literature review will give a brief overview of research on and about: the definition of corporate entrepreneurship; the importance and value of corporate entrepreneurship; how to foster, develop and implement corporate entrepreneurship and sustaining corporate entrepreneurship and innovation.

Definition of corporate entrepreneurship

As with the definition of entrepreneurship, various authors according to (Kuratko, Hurley and Hornsby, 2001) have various interpretations of the definition of corporate entrepreneurship. Pinchot (1985) defines “intrapreneurship” as entrepreneurship inside the organisation where individuals will champion new ideas from development to complete profitable reality. Ireland, *et al.* (2006a) defines corporate entrepreneurship as a process through which individuals in an established business pursue entrepreneurial opportunities to innovate, without regard for the level and nature of currently available resources. Stevenson and Jarrilo (1990) refer to corporate entrepreneurship as a process by which individuals inside businesses pursue opportunities without regard to the resources controlled by them. Antoncic and Hisrich (2007, 2004, 2003) refer to emergent behavioural intentions or behaviours deviating from the customary way of doing business, and Hisrich, Peters and Shepherd (2008) as a spirit of entrepreneurship within the existing business. Morris, Kuratko and Covin (2008) define corporate entrepreneurship as a term used to describe entrepreneurial behaviour inside established mid-sized and large businesses.

For purposes of this research the construct “corporate entrepreneurship” will be referred to as defined by Sharma and Chrisman (1999:18): “Corporate entrepreneurship is the process

whereby an individual or a group of individuals, in association with an existing organisation, create a new organisation or instigate renewal or innovation within the organisation”.

The importance and value of corporate entrepreneurship

Kuratko, *et al.* (2004) indicate that as the corporate landscape becomes more complex, competitive and global, established businesses have increasingly embraced corporate entrepreneurship for the purposes of: profitability; strategic renewal; fostering innovativeness; gaining knowledge for future revenue streams; and international success. Kuratko, *et al.* (2005) also indicated that corporate entrepreneurship is practiced in businesses to develop competitive advantages and a separate identifiable strategy.

Antoncic and Zorn (2004) state that past research has presented much evidence for the relationship of corporate entrepreneurship to organisational growth (Antoncic and Hisrich, 2001; Wiklund, 1999; Morris and Sexton, 1996; Covin 1991; Covin and Slevin 1986; Zahra and Covin, 1985) and profitability (Antoncic and Hisrich, 2001, 2000; Wiklund, 1999; Zahra and Covin, 1995; Zahra, 1993, 1991; Covin and Slevin, 1986;).

Morris *et al.* (1996) found a significant positive relationship between entrepreneurial intensity and increased growth. Zahra *et al.* (1995) and Wiklund (1999) found that entrepreneurial orientation of businesses tends to have sustainable long-term effects on growth and financial performance in addition to short-term effects.

Hisrich and Peters (1998) proved that entrepreneurship often results in the creation of new value. Organisational wealth creation has been considered an important, yet implicit, consequence of corporate entrepreneurship in general (Pinchot, 1985; Kanter, 1984; Peters and Waterman, 1982) as well as in corporate entrepreneurship induced performance measurement (Naman and Slevin, 1993).

Antoncic and Hisrich (2004) indicate that businesses with entrepreneurial top management postures engaging in entrepreneurial activities are expected to achieve higher levels of growth (absolute – growth in sales and in number of employees and relative – growth in market share), profitability (absolute – return of sales, return on equity, and return on assets and relative – in comparison to competitors) and new wealth creation (new available funds), than businesses that are lower in corporate entrepreneurship engagement.

Ireland, *et al.* (2006a) proved that leading edge businesses see the effective use of corporate entrepreneurship as a source of competitive advantage and as a path to higher levels of financial and non-financial performance.

Thornberry (2001) states that not all businesses need to embrace a concept of corporate entrepreneurship. Some businesses are doing quite well running their businesses in a planned, effective and efficient manner. But some businesses need an infusion of creativity, especially if they are operating in a rapidly changing or turbulent environment. Thornberry (2001) indicates that it is the large slow-moving bureaucratic business operating in an increasingly turbulent environment that needs to do the most entrepreneurial soul searching.

How to foster, develop and implement corporate entrepreneurship

Hisrich, *et al.* (2008) define an entrepreneurially fostering environment as an environment that enhances organisational members' perceptions of entrepreneurial action as both feasible and desirable. Antoncic, *et al.* (2004) point out that one important organisational element that is beneficial to corporate entrepreneurship is organisational and management support for entrepreneurial activities. According to Antoncic, *et al.* (2004) organisational support refers to management encouragement, worker's discretion about their work-related decisions, designating idea champions, establishing procedures to solicit and examine employee ideas, permeability of job boundaries, training, rewards and reinforcement, and availability of time and financial resources for pursuing new ideas or projects. Organisational support for entrepreneurial activities has been proved as beneficial for corporate entrepreneurship in the following ways: top management involvement (Antoncic, 2007; Merrifield, 1993); training (Stevenson, *et al.*, 1990); trusting individuals within the business to identify opportunities (Stevenson, *et al.*, 1990); resource availability (Pinchot, 1985; Kanter, 1984); encouragement (Hisrich, *et al.*, 1989); and rewards (Hisrich, *et al.*, 2008; MacMillan, 1986).

The key to making an organisational structure entrepreneurial involves several factors, especially fostering the right climate or culture (Echols and Neck, 1998). An entrepreneurial climate that promotes the detection and facilitation of opportunities, as well as fostering motivation to pursue opportunities, provides an ideology to which employees can commit while facilitating the emergence of social capital.

Parboteeah (2000) states that developing and nurturing an entrepreneurial culture will contribute to businesses' ability to develop innovative solutions and sustain strategic competitive advantages.

Kuratko and Hodgetts (2004) suggest that to structure the business for a corporate entrepreneurial climate, businesses need to invest heavily in entrepreneurial activities that allow new ideas to flourish in an innovative environment. As a way for businesses to develop key environmental factors for intrapreneurial activity, a corporate entrepreneurship training programme often induces the change needed in the work atmosphere. Toftaoy and Chatterjee (2005) states that corporate entrepreneurship training programmes, within the business, will separate businesses from their competitors. The corporate entrepreneurship training programme is a way of launching corporate entrepreneurial teams, via intrapreneurship workshops or seminars. Marcus and Zimmerer (2003) investigated the corporate performance of Fortune 500 companies. The investigation focused on corporate entrepreneurial training programmes in Fortune 500 companies, and utilised a self-reporting technique in order to determine the presence of such programmes in the business. All the respondents indicated that the impact of intrapreneurial programmes was positive. Marcus, *et al.*, (2003) conclude their findings and indicate that as corporate entrepreneurship programmes provide opportunities for success, increasing future research could provide an objective basis for determining the extent to which such programmes are feasible and have the potential to be incorporated into organisational structures.

RESEARCH METHODOLOGY

Research design

This research is designed as a formal study. The formal study consists of a literature review and an empirical study. The literature review aims to survey the importance and value of corporate entrepreneurship and how to foster, develop and implement corporate entrepreneurship. The empirical part of the study will focus on the assessment of corporate entrepreneurial and innovative levels in South African businesses. The time dimension of the study is cross-sectional. The research will be conducted in a field environment in South African businesses.

Sampling

Given the exploratory nature of the study and the limited research in South Africa, short-term insurance businesses were used as a point of departure. The target population is employees in South African short-term insurance businesses. The parameters of interest indicate that the participants must be employees from different short term insurance businesses employed in the South African short-term insurance industry; the employees must be full time employees in South African short-term businesses; and the full time employees must include employees from top management level to normal workers in all the various business units in the businesses. The study will make use of a non-probability, purposive or

judgmental sampling technique. In a purposive or judgmental sampling technique, an experienced individual selects the sample based upon some appropriate characteristic of the sample members (Zikmund, 2003). The sample is drawn from different insurance businesses in the South African short-term insurance industry.

Data collection

For the literature section of the study, data will be collected by means of a literature search using secondary data such as journals, textbook, databases and the Internet. A self-administered questionnaire will be used to assess the corporate entrepreneurial and innovative levels in five South African short-term insurance businesses. The responses will be anonymous and this data source will be respected in the study.

The entrepreneurial health audit developed by Ireland, *et al.* (2006a) was used to conduct the assessment. The entrepreneurial health audit consists of three stages. First, the business level entrepreneurial intensity is determined by means of the Entrepreneurial Performance Index (EPI) of Morris (1998). The EPI consist of 21 questions. The first 12 questions determine the degree of entrepreneurship in terms of innovativeness, risk-taking and proactiveness, and the other 9 questions determine the frequency of entrepreneurship. Together these 21 questions determine a businesses entrepreneurial intensity level. The EPI has been proved as a reliable and valid instrument (Morris, 1998).

Secondly, the insurance businesses internal work environment is examined to understand the factors accounting for the degree of entrepreneurial intensity the insurance business has at a point in time. The Corporate Entrepreneurship Assessment Instrument (CEAI) of Kuratko, *et al* (2001) was used to collect this information. Kuratko, *et al.* (2001) developed the CEAI in 1990. The instrument consists of 78 five-point likert-style questions. The desired outcome of the CEAI is to assess a level of corporate entrepreneurship intensity and recognition of corporate entrepreneurship by management within a business. Five distinct internal organisational factors are addressed: management support, work discretion, organisational boundaries, rewards/reinforcement and time availability. A summary of the meaning of these internal organisation factors (antecedents) is as follows:

- Managerial support refers to the willingness of top-level managers to facilitate and promote entrepreneurial behaviour, including the championing of innovative ideas and providing the resources people require for taking entrepreneurial actions.

- Work discretion/autonomy refers to top-level managers' commitment to tolerate failure, provide decision-making latitude and freedom from excessive oversight and to delegate authority and responsibility to managers.
- Rewards/reinforcement refers to developing and using systems that reinforce entrepreneurial behaviour, highlight significant achievements and encourage pursuit of challenging work.
- Time availability refers to evaluating workloads to ensure that individuals and groups have the time needed to pursue innovations and that their jobs are structured in ways that support efforts to achieve short- and long-term organisational goals.
- Organisational boundaries refer to precise explanations of outcomes expected from organisational work and development of mechanisms for evaluating, selecting and using innovations.

The CEAI has been proved as a reliable and valid instrument (Hornsby, Kuratko and Zahra, 2002). Thirdly, the audit reveals to businesses the type of work to be completed, to help employees establish an entrepreneurial mindset as the source of, and reinforcement for, the entrepreneurial behaviour to be displayed, in order for the chosen corporate entrepreneurial strategy to be successfully implemented. As a way for businesses to develop a sound programme for understanding entrepreneurial activity, a corporate entrepreneurial development programme should be established.

Data analysis

The quantitative data of the questionnaires was analysed with a statistical package (SPSS) by the University of Pretoria's statistical department. SPSS was used to compile descriptive and inferential statistics. Based on the distribution of the descriptive statistics obtained from the study, the following techniques were used to perform the inferential analysis: frequency distribution, cross-frequency tabulation, item analysis, factor analysis, chi-square test, One-Way Analysis of Variance (ANOVA), Post-Hoc test; t-test and Pearson's Correlation Coefficient.

RESULTS/FINDINGS

The literature study revealed the necessity for businesses to stimulate, foster and develop corporate entrepreneurship in a business. Various methods and techniques were identified to stimulate, foster and develop corporate entrepreneurship in an existing business. Firstly the demographic profile of the respondents by means of descriptive statistics is reported. Secondly the validity and reliability of the instruments are reported followed by the results of

the businesses entrepreneurial intensity, the climate for corporate entrepreneurship and lastly the gaps that need to be addressed by a corporate entrepreneurial development programme.

Descriptive statistics

The descriptive statistics of this study will be presented through frequencies and percentages by means of tables. The sample consisted of 1900 employees in five South African short-term insurance businesses and 386 questionnaires were returned. This gives a response rate of 20,3%. In the discussion of the various descriptive statistics some frequencies were omitted because of non-responses.

Descriptive statistics will be provided on the gender of respondents, age, ethnicity, highest education qualification, how many years the respondents have been with the business, the distribution of respondents in the various business units of the business, the current management levels and how many years the respondents have been in their current job.

Table 1 indicate that 36,4% of the respondents were males and 63,59% females. There were not sufficient respondents in each age category (as indicated in the questionnaire) therefore the categories had to be regrouped as indicated in table 1. From this table it can be noted that most of the respondents (29, 02%) fall in the age category of 26 to 30 years. The second largest group falls between the ages of 31 and 35 years (24, 87%). Collectively the age distribution of the respondents indicates that 27, 98% of the respondents are older than 36 years and 72, 02% younger. This means that the respondents consist mostly of very young people.

From table 1 the respondents from the white or Caucasian ethnic group were 57, 85%. The second biggest group was the coloureds (18, 13%) followed by the blacks (12, 83%) and lastly the Indian or Asians (11, 78%).

The questionnaire originally categorised the various educational qualifications into five different groups, but there were not sufficient numbers in this format. The categories were adjusted to only three. From the statistics on the highest educational qualification it can be seen that 50, 52% of respondents have a qualification of Grade 12 or lower. If the other two categories are grouped together it can be deduced that 49, 48% of the respondents have a post matric qualification.

Originally the categories for the number of years the respondents have been with the insurance were grouped in nine categories. Again, because of insufficient responses in each category, the categories were reduced to three. From table 1 it can be seen that most respondents (54%) have been with the business for 3 or more years. Because a huge number of respondents fall in the category “0 to 2 years” (45%) it would be a good indication to compare this with the businesses staff turnover. This could be included as a possibility for future research and comparisons.

On the original questionnaire a distinction was made between all the various business units in the insurance businesses. The responses were grouped into four broad categories: sales, information technology, claims and administration and shared services. The sales category includes direct sales, brokers and commercial sales. Claims and administration includes all the employees from the claims and administration departments as well as top management, legal employees, client services and the ombudsman. The shared services category includes financial services, operations, human resources, and risk and assurance. The information technology group includes all the employees working with computer related aspects, information systems and information technology. Most respondents (59,06%) are allocated in the claims and administration business unit. This makes sense because the bulk of an insurance businesses staff will form part of claims and administration.

In terms of the current management levels of the respondents the top management category includes the director and general managers. The middle management category includes the Business managers; Human Resources managers; Project managers; Development managers; Senior Brand managers; and Assistant General managers. The Supervisory (junior management) category includes Team managers; Sales managers; Marketing managers; Team Leaders; Brand managers; Office managers; and Supervisors. Lastly the Call Centre and non-Call Centre employees includes the following: Sales Consultants; Contact Centre Consultants; Message Centre Consultants; Sales Administrators; Loss Adjustors; Claims Consultants; Personal Assistants, Programmers and Media Planners.

From table 1 the majority representation (58,55%) is from employees in the Call Centre and general workers from the Non-Call Centre category. The responses from the top management (12, 18%) and supervisors (junior management level) (19, 94%) correspond with the compilation of businesses in general. The middle management level, in terms of the other levels, is under-represented with only 9, 33%.

In the original questionnaire there were nine categories in terms of the years that the respondents have been in their current jobs, but because there were insufficient responses it had to be re-grouped into three categories. Table 1 indicate that 38,6% of the respondents have been in their current jobs for less than 12 months, 35,75 % of the respondents have been in their current position for one to two years and the remainder (25,65%) for three years or more.

When the time in current job is compared with time that the respondents have been in the business, there is a direct correlation. 45,6% of respondents indicated that they have been with the business for less than two years and 38,6% respondents indicated that they have been in their current job for less than a year. 54,4% of respondents indicated that they have been working in the business for 3 years or more and 25,65% respondents indicated that they have been in their current position for more than 3 years. This means that the employees in the insurance businesses although they have been with their business for a number of years, are not stagnating in the same positions and are either promoted or are moving from one business unit to another.

TABLE 1 Descriptive statistics of respondents

	Category	Frequency (n)	Percentage
Gender	Male	138	36.41
	Female	241	63.59
	Total	379	100
Average age	18 – 25 years	70	18.13
	26 – 30 years	112	29.02
	31 – 35 years	96	24.87
	36 – 40 years	57	14.77
	41 years and older	51	13.21
	Total	386	100
Ethnic groups	Black	49	12.83
	Coloured	67	17.54
	Indian or Asian	45	11.78
	White or Caucasian	221	57.85
	Total	382	100
Educational qualification	Grade 12 or lower	195	50.52
	Post Matric Diploma or Certificate	137	35.49

	Bachelor Degree(s) and/or Post Graduate Degree(s)	54	13.99
	Total	386	100
Quantity of years with the business	0 – 2 years	176	45.60
	3 -10 years	153	39.63
	11 – years and more	57	14.77
	Total	386	100
Business unit level	Sales	52	13.48
	Information Technology	25	6.48
	Claims and Administration	228	59.06
	Shared Services	81	20.98
	Total	386	100
Current job level	Top and Senior Management	47	12.18
	Middle Management	36	9.33
	Supervisors (Junior Management)*	77	19.94
	Call Centre and Non-Call Centre staff	226	58.55
	Total	386	100
Years in present job	0 – 12 months	149	38.60
	1 – 2 years	138	35.75
	3 – more years	99	25.65
	Total	386	100
* Insurance businesses used the term Junior Management in stead of Supervisors or Supervisory management			

The outstanding characteristics resembling the profile of the respondents are as follows: Female, between the age of 26 and 30 years; from the white or caucasion ethnic group; with an educational qualification of grade 12 or lower, that has been with the insurance business for less than 2 years; working in the claims or administrative section of the business and forms part of the call centre or non-call centre level and is less than 6 to 12 months in her present position.

Validity and reliability of the measuring instruments

The Entrepreneurial Performance Index (EPI) and the Corporate Entrepreneurship Assessment Instrument (CEAI) have been used widely in various research projects and in various countries. In all international research studies where these instruments have been used it was proved that both instruments are valid and reliable. Studies conducted in South Africa also confirm the validity and reliability (Scheepers, Hough and Bloom, 2007; Nyanjom, 2007; Gantsho, 2006; Bauwmeester, 2005). Based on these premises it can be stated that the two instruments used in this study are valid and reliable. To add further support to the validity and reliability of the CEAI, a rotated factor analysis was conducted in this study.

TABLE 2 Rotated factor analysis of the CEAI

Variable descriptor		Factor loadings				
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
C9	People are encouraged to take calculated risks	0.890				
C10	Individual risk takers are recognised	0.808				
C11	“risk taker” is regarded as a positive attitude	0.806				
C12	Business supports small and experimental projects	0.614				
C13	Desire of people to generate new ideas across the departmental and functional boundaries	0.566				
C6	Senior managers encourage innovators to bend rules	0.556				
C8	Several options exist in the business to get financial support for innovative projects	0.551				
C48	Business rewards employees who take risks	0.535				
C31	Several options exist in business to get financial support for innovative projects	0.509				
C32	Successful innovative projects get additional rewards	0.442				

C30	New innovative ideas are followed by promotion	0.320			
C59	Organisational structure is flexible	0.325			
C76	Businesses environment encourages openness about ways to improve operations	0.392			
C74	Innovation and risk taking are core values in the business	0.468			
C49	Jobs are broadly defined	0.395			
C14	People are encouraged to talk about ideas for new projects	0.472			
C75	New ideas receive quick feedback	0.304			
C5	If working on projects, making decisions without going through red tape is allowed	0.461			
C4	Innovative ideas receive management encouragement	0.406			
C7	Top managers are experienced with the innovation process	0.485			
C46	Job description specifies standards of performance		0.582		
C34	Level of work performance is clear		0.577		
C33	Work performance is discussed frequently		0.540		
C52	Annual performance appraisals include employee innovativeness		0.532		
C72	Business has an urgency for change and innovation		0.300		
C69	Business has a culture of reward for the tried and true		0.370		
C57	Managers are encouraged to “micromanage” employees and projects		0.311		
C28	Get special recognition if work performance is good		0.374		
C67	Organisational structure is clearly		0.484		

	defined and delineated			
C26	Rewards depend on work on the job	0.375		
C51	Creative potential of employees is developed	0.447		
C50	Employees can pursue multiple career paths	0.318		
C27	Job responsibilities are increased if individuals are performing well	0.352		
C54	Business balances incentives for individual initiative with incentives for team collaboration	0.314		
C70	Business celebrates innovative achievements	0.383		
C22	Individual gets to decide what to do on job		0.808	
C20	Freedom to decide what to do on job		0.778	
C21	Own responsibility to decide how job gets done		0.759	
C23	Have autonomy to decide what to do on job		0.718	
C15	Freedom to be own boss		0.574	
C18	Business provides freedom to use own judgement		0.570	
C19	Individuals get the chance to do something that makes use of their abilities		0.424	
C17	Business gives opportunity to be creative		0.500	
C42	Follows standard operating procedures to do major tasks			0.323
C61	Red tape and slow approval are problems in the business			0.425
C53	More concern with process than with performance			0.379
C16	Mistakes made on job are punished and get harsh criticism			0.403

C56	Bureaucratic system takes entrepreneurial ability away				0.337
C58	Too many levels in the business				0.428
C60	Rigid chain of command limits ability to experiment with new ideas				0.487
C73	Business has motto: “ if it is not broken, don’t fix it”				0.423
C3	Top management is aware and receptive of ideas and suggestions				0.439
C2	New ideas for improvement are encouraged				0.415
C37	Have right time and work load to do everything well				0.759
C36	Enough time to get everything done				0.738
C39	Work with time constraint on job				0.465
C40	There is time for long-term problem solving				0.446
C38	Job is structured with little time to think of wider organisational problems				0.417
C35	Work load keeps from spending time on developing new ideas				0.385
C41	Employees with good ideas get free time for development of ideas				0.334

In table 3 the variance of each factor is indicated.

TABLE 3 Variance explained by the factor (VP)

Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Total
7.237	4.907	3.876	2.919	2.522	21.461
All Eigen values >1					

The Eigen values, which determine the number of factors when factor loading is done, are indicated in table 3. The Eigen values have to be greater than or equal to one in order to be included as a factor when loading is done on variables.

Although the cumulative variances explained (VP) in table 3 are not on such a high level, it is still believed that there is a stable factor structure present. This is supported by the Eigen values that are all above 1 and it is the opinion of the researchers that this is on an acceptable level. From the factor analysis the factors are labelled as follow: Factor 1, managerial support for corporate entrepreneurship and innovation, factor 2 - rewards, factor 3 -work discretion, factor 4 - organisational boundaries and factor 5, time availability.

To confirm the reliability and accuracy of the CEAI, the Cronbach alpha values were calculated for the five factors. Table 4 summarises these values. As can be seen from this table the Cronbach alpha values are relatively high. Nunally (1978) recommended that 0.500 is an acceptable threshold for an acceptable alpha score. It can be deduced that the accuracy is on an acceptable level and supports the fact that the CEAI is reliable.

TABLE 4 Cronbach alpha values of the CEAI factors

Factor	Description	Cronbach alpha value
Factor 1	Management support	0.9222
Factor 2	Rewards/reinforcements	0.7936
Factor 3	Work discretion	0.8700
Factor 4	Organisational boundaries	0.6591
Factor 5	Time availability	0.7119

The overall alpha value of these factors is 0.9252.

Results of the businesses entrepreneurial intensity

The entrepreneurial intensity is measured in terms of the degree and frequency of entrepreneurship. Table 5 summarises the various components of the degree of entrepreneurship. The degree of entrepreneurship is measured on a 5-point Likert scale ranging from 1 – strongly disagree to 5 – strongly agree. On the premises of this scale it can be concluded that the business has a moderate degree of entrepreneurship because the average mean scores are around 3 to 4 out of 5.

In terms of the stated hypothesis it can be deduced that **Hypothesis Ho1 is accepted**. The degree of entrepreneurship in South African businesses is not high.

TABLE 5 Results of the variables of the degree of entrepreneurship

	Variable	N	1	2	3	4	5	Mean	Std Dev
1	A high rate of new product/service introductions, compared to competitors (including new features and improvements)	385	1	4	18	51	26	3.96	0.82
2	An emphasis on continuous improvements in methods of production and/or service delivery	386	1	5	11	54	29	4.04	0.83
3	Risk-taking by key executives in seizing and exploring chancy growth opportunities	383	3	10	42	36	9	3.37	0.90
4**	A “live and let live” philosophy in dealing with competitors	384	4	12	40	37	7	3.32	0.91
5	Seeking of unusual, novel solutions by senior management to problems via the use of “idea people”, brainstorming, etc.	385	3	15	28	42	12	3.46	0.98
6**	A top management philosophy that emphasises proven products and services, and the avoidance of heavy new product development costs	385	1	14	41	34	10	3.37	0.88
Top level decision-making that is characterised by:									
7**	Cautious, pragmatic, step-at-a-time adjustments to problems	385	3	20	30	41	6	3.27	0.94
8	Active search for big opportunities	383	3	6	25	49	17	3.72	0.91
9	Rapid growth as the dominant goal	373	2	10	32	42	14	3.53	0.93
10	Large, bold decisions despite uncertainties of the outcomes	382	3	28	40	22	7	3.00	0.95
11**	Compromises among the conflicting demands of owners, government, management, customers, employees and suppliers	380	2	16	48	29	5	3.18	0.82
12	Steady growth and stability as primary concerns	381	2	7	25	50	16	3.71	0.88
**Questions 4, 6, 7 and 11 are reversed									

The frequency of entrepreneurship refers to how many entrepreneurial events take place in a given period of time (Morris, *et al.*, 2008). The EPI uses 9 questions to determine a business's frequency of entrepreneurship. With these 9 questions there is a clear distinction between the products, services and processes. For purposes of this study the products and services questions are combined, because of the nature of the businesses, therefore only 5 questions were used to determine the frequency of entrepreneurship. The results of the frequency of entrepreneurship are presented in table 6.

Table 6 indicates that 45 % of the respondents don't know how many products or services their businesses introduced during the past two years. A large number of respondents (45%) indicated that they had been working for their business for less than 2 years (refer to table 1). These relatively new employees may not be aware of all the products and services offered by their business. A possible reason for this is that these new products/services introduced in the insurance business are not clearly communicated throughout the business and/or that a culture regarding new product innovation is not present in their businesses. From the results presented in table it can be deduced that most of the new products and services introduced during the last two years (2007 to 2009) range between 0 – 5.

The results of the number of new processes implemented by the insurance business in the last two years is almost the same as the number of new products and services introduced by the business over the same period of time. As can be seen in table 6 43 % of the respondents don't know how many new processes were implemented by their business. Thirty five per cent of the respondents indicated that between 0 and 5 new processes were implemented and 18% of the respondents indicated that 6 to 10 new processes were implemented. The same argument as offered with regard to table 6 can be used for the implementation of new processes.

From table 6 it is evident that 41% of respondents indicated that as an individual they introduced more product improvements or revisions during the last two years (2007 to 2009) compared to previous years. This is a good sign especially when compared to the 6% of respondents that had less new improvements or revisions than the previous two years. It is not a good sign that 37% of the respondents had no new product improvements or revisions.

The majority of the respondents (51%) according to table 6 indicated that their business compared well with their businesses' major competitors in the industry.

TABLE 6 Results on the frequency of entrepreneurship (2007 – 2009)

Variable	Categories	Frequency (n)	Percentage
Number of new products/services introduced by the business	0 – 5	141	38
	6 – 10	51	14
	> 10	12	3
	Don't know	167	45
	Total	371	100
Number of new processes implemented by the business	0 – 5	127	35
	6 – 10	65	18
	> 10	14	4
	Don't know	156	43
	Total	362	100
Number of new product improvements/revisions of individual respondents introduced	Less	23	6
	Same	56	16
	More	147	41
	None	132	37
	Total	358	100
Number of new product introductions compared with major competitors	Less	23	6
	Same	20	14
	More	188	51
	None	107	29
	Total	368	100
Degree to which new product introductions include products that did not previously exist in the market	Less	19	5
	Same	63	17
	More	163	44
	None	124	34
	Total	369	100

It is very important for any business to introduce new products or services to a market and also to determine the effect of these products or services that did not exist previously in the market. Table 6 shows that the insurance businesses introduced 44 % more new products or services to the market that did not previously exist in the market. These findings contradict the findings where respondents indicated the number of new products and services that their businesses introduced during the past two years (2007 – 2009). It was

indicated that between 0 to 5 new products and services were introduced. This could hardly be 44 % more than what previously existed in the market.

From the results presented in terms of the frequency of entrepreneurship a few contradictions exist and it indicates that the overall frequency of entrepreneurship is not very high. In terms of the stated hypothesis it can be deduced that hypothesis Ho2 is accepted - the frequency of entrepreneurship in South African businesses is not high.

The degree and frequency of entrepreneurship need to be combined to determine the entrepreneurial intensity. Because the degree and frequency of entrepreneurship is not high, it can be deduced that hypothesis Ho3 is accepted - the entrepreneurial intensity in South African businesses are not high.

Results – climate for corporate entrepreneurship

The CEAI was used to determine the perception of employees in the workplace of the business. The CEAI distinguishes five distinctive organisational antecedents which form the dependent variables of this study. These antecedents and the CEAI were referred to in the literature review.

Hypotheses 4 to 8 are formulated in relation to these dependent variables and various independent variables. The one-sample chi-square test is carried out to indicate significant differences of the variables of interest posed in this study and is a determinant of accepting or rejecting the null hypotheses 4 to 8. The significance level calculated for each of these variables provides information about the reliability of that correlation and provides a means to improve the reliability of the measure by indicating how free it is of errors from other causes.

The level of significance used in this study is 0.05. This measure indicates $p > 0.05$ and implies that there are no differences. Conversely measures of $p < 0.05$ reveal that a statistical significance has been observed suggesting the real difference to have occurred from the causes. It will be on this basis that the study will examine and draw its conclusions on the reflected results.

If the biographical variables (gender, age, ethnicity, highest qualification, years in insurance brand, business unit, management level and years in present job) were to be analysed individually statistical significant difference would emanate from this analysis. An overall analysis is displayed in table 7.

TABLE 7 Overall ANOVA in terms of biographical and dependent variables

Factors	Mean Square	F Value	Pr Value
Management support	1.63	1.72	0.0295
Work discretion	3.87	4.58	<.0001***
Rewards/reinforcement	0.94	0.99	0.4775
Time availability	2.08	2.21	0.0023***
Organisational boundaries	2.66	3.00	<.0001***
p*** statistical significance at the 5 % level			

In terms of the biographical data of this sample and the various factors there is a significant statistical difference in terms of work discretion, time availability and organisational boundaries. No statistical difference is found in terms of management support and rewards/reinforcement.

TABLE 8 Mean scores of the corporate entrepreneurial factors

Factor	Frequency (n)	Mean	Standard Deviation
Management support	375	3.15	0.53
Work discretion	375	3.30	0.41
Rewards	375	3.32	0.71
Time availability	375	3.00	0.47
Organisational boundaries	375	2.73	0.65

From the mean scores presented in table 8 it is clear that the overall perception of the corporate entrepreneurial climate is moderate. Respondents had to indicate their perceptions on a 5-point likert scale ranging from strongly disagree to strongly agree. From this analysis it is clear that respondents agree mostly in terms of the rewards that are in place. This is supported by the statistics as provided in table 7 where it was indicated that there is no statistical significant difference in all the biographical areas. The areas that need most attention are time availability and organisational boundaries.

Table 9 gives a summary of the relationship between the corporate entrepreneurial factors (dependent variables) and managers and employees (independent variables).

TABLE 9 Relationship between the corporate entrepreneurial factors (dependent variables) and managers and employees (independent variable)

Independent variable	Factors				
	Management support	Work discretion	Rewards/ reinforcement	Time availability	Organisational boundaries
Management level	0.0039***	0.0046***	0.8833	0.2706	0.0001***
p*** statistical significance at the 5% level					

In terms of the stated hypotheses the following can be deduced:

Hypothesis Ho4 is rejected. There is **no statistical significant difference** between the corporate entrepreneurship opinions of **managers and employees** in South African businesses regarding the corporate entrepreneurship construct: **managerial support**.

Hypothesis Ho5 is rejected. There is **no statistical significant difference** between the corporate entrepreneurship opinions of **managers and employees** in South African businesses regarding the corporate entrepreneurship construct: **work discretion**.

Hypothesis Ho6 is accepted. There is **no statistical significant difference** between the corporate entrepreneurship opinions of **managers and employees** in South African businesses regarding the corporate entrepreneurship construct: **rewards/reinforcement**.

Hypothesis Ho7 is accepted. There is **no statistical significant difference** between the corporate entrepreneurship opinions of the **managers and employees** in South African businesses regarding the corporate entrepreneurship construct: **time availability**.

Hypothesis Ho8 is rejected. There is **no statistical significant difference** between the corporate entrepreneurship opinions of the **managers and employees** in South African businesses regarding the corporate entrepreneurship construct: **organisational boundaries**.

Corporate entrepreneurship development programme

The third and final step of the entrepreneurial health audit includes the compilation of a corporate entrepreneurial development programme that focuses on the development of entrepreneurial behaviour that the business is requesting of the relevant parties in the business. According to Ireland, *et al.* (2006b) this is the foundation of a successful entrepreneurial strategy.

From the results presented on the entrepreneurial intensity and on the climate for corporate entrepreneurship, it is clear that gaps exist that need to be addressed in South African short-term insurance businesses in order to improve the overall corporate entrepreneurial and innovation levels for this industry. Ireland, *et al.* (2006b) stated that if a business achieves a low corporate entrepreneurial score it will also indicate the areas that need to be addressed in a development programme.

The following gaps were identified from the results presented in this study:

- The degree and frequency of entrepreneurship, and the entrepreneurial intensity of businesses in South Africa is not high. This means that there needs to be training and development with regard to innovativeness, proactiveness and risk taking.
- There is a significant statistical difference between people who have been working in their businesses for 2 years and less versus the employees that have been working for 3 years or more.
- There are differences between the various business units (Sales, IT, Claims and Administration, Shared Services) with regard to innovations.
- There are differences in the perceptions of management levels (top, middle, lower management, and call and non-call centre employees) in terms of innovativeness, proactiveness and risk taking. There is a very distinct difference between top and middle level management and the rest of the employees).
- Only a few (41%) of the employees indicated that they had introduced new products or made improvements or revisions. It could be that most employees don't know how to innovate or that only certain employees or units in their businesses are able to innovate.
- New employees do not have the same exposure to innovation compared to the employees that have been working longer in their businesses.
- Only 0 to 5 new products were developed and 0 to 5 processes implemented in a two year period. There is a gap in terms of idea identification.
- The scores on time availability and organisational boundaries were not high and need to be addressed.
- Although the scores on management support for corporate entrepreneurship and work discretion were higher than for time availability and organisational boundaries, they are still not very high and also need to be addressed.

Because of the gaps identified from the two measuring instruments (EPI and the CEAI) it is clear that a need for a corporate entrepreneurship development programme exists to

address these gaps. **Hypothesis Ho9 can be rejected.** There is no need for a corporate entrepreneurship development programme in businesses in South Africa.

CONCLUSIONS

This study analysed the corporate entrepreneurship and innovative levels in South African businesses by means of an established corporate entrepreneurial health audit instrument. This study was the first of its kind in South Africa. Many times international researchers develop instruments and they are only tested in the country of origin. This does not imply that the instrument will be successful in other countries. This study proves that an internationally developed instrument can be applied in a South African context. Further contributions to the science are as follows:

- The results of this study can serve as the beginning of establishing benchmarks for the South African short-term insurance industry in terms of entrepreneurial intensity and a culture for corporate entrepreneurship.
- No research has been done on the South African short-term insurance industry and corporate entrepreneurship. The Entrepreneurial health audit tool can be used by decision makers as part of their effort to help their businesses successfully to engage in entrepreneurship as a path to organisational effectiveness.
- As indicated by Thornberry (2003) and Zahra (1991), not enough empirical research exists in the field of corporate entrepreneurship. This study contributes to the empirical studies in the field of CE to support the literature and those models that have not been tested empirically.
- The findings can assist the managers not only in South African short-term insurance businesses but also in other businesses to understand the corporate entrepreneurial process, and can provide guidelines for businesses involved in corporate entrepreneurship.
- The guidelines given in this study to foster and implement corporate entrepreneurship can be used by industry leaders, businesses and managers. Insights are helpful to businesses in understanding what can be done to improve the businesses ability to compete in the complex, rapidly changing, competitive environments. These guidelines can also assist managers in undertaking change efforts directed at stimulating a corporate entrepreneurial and innovative mindset.

LIMITATION OF THE STUDY

Cooper, *et al.*, (2008) emphasise that all research studies have their limitations, and the sincere investigator recognises that researchers need aid in judging the study's validity. In this regard the reader should be aware of the following limitations of this study:

- For future research the sample size should be increased to explain fully the population's characteristics and to limit the chance of a sampling error occurring, and to increase the response rate of the respondents.
- The study need to be expanded to include businesses from various industries in South Africa, not just short-term insurance businesses.
- No benchmarks exist on the South African businesses and it is difficult to determine whether the entrepreneurial intensity score is low, high or moderate. As literature indicated (Morris, *et al.*, 2008) industry benchmarks need to be established.
- Results of the entrepreneurial health audit applied in other international countries are not available. This could have been beneficial to compare with this study.

RECOMMENDATIONS AND FUTURE RESEARCH

Corporate entrepreneurship is a relatively young field in South Africa. South African industries and businesses can take note of the findings of international research on how to structure their businesses to become more entrepreneurial. For future research the following recommendations can be made:

- Corporate entrepreneurial and innovative benchmarks should be established for South African industries. This could encourage the individual businesses to assess their corporate entrepreneurial and innovative levels. This could also assist them in improving their entrepreneurial intensity and corporate entrepreneurial climate.
- The empirical knowledge on the processes associated with corporate entrepreneurial activities is mostly based on case studies. Different research approaches to document the processes and problems associated with the implementation of corporate entrepreneurship need to be exploited.
- A longitudinal study should be conducted to determine whether high levels of entrepreneurial intensity are sustainable over time, and what the effect will be after conducting a corporate entrepreneurial development programme.
- Research can also be done on how the corporate entrepreneurial process develops on successfully exploiting opportunities in a South African context.

- An extensive research project can be launched to determine which South African businesses make use of corporate entrepreneurship development programmes and the content of these programmes, plus how they compare to international programmes. It could also be determined whether these development programmes are evaluated to determine their successfulness.

The study has the following managerial implications:

- Businesses must assess their entrepreneurial intensity and climate for corporate entrepreneurship to identify gaps to address in developing corporate entrepreneurship in their businesses.
- A corporate entrepreneurial programme is one of the best methods to instil corporate entrepreneurship and innovation in a business.
- Not only top- and senior level management, but all the employees in the business need to undergo training and development in corporate entrepreneurship and innovation.
- Entrepreneurial activity is driven by individuals and the more a business can exhibit entrepreneurial qualities and its people believe in behaving entrepreneurially – the greater the businesses ability to achieve maximum innovation or entrepreneurial success.
- Corporate entrepreneurship needs to be integrated throughout the entire business – cannot focus on just one specific area.
- Entrepreneurial intensity has a direct influence on organisational performance.
- A business's entrepreneurial intensity is influenced by the businesses strategic management practices.
- In businesses that want to foster and develop corporate entrepreneurship, the executives must first of all know what they want to achieve. They must begin with establishing the desired corporate entrepreneurial outcomes, develop measurable goals, make decisions on degree and frequency of entrepreneurship, determine whether the business wants to be a follower or leader in terms of innovation; determine how much time employees can devote to new versus existing initiatives and lastly the amount and type of innovation that needs to come from the different levels in the business.
- Research has shown that businesses that want to be successful in terms of corporate entrepreneurship and innovation need to adhere to the following: small number of managerial layers; Organisational structure without highly structured job roles; controls that are able to balance loose and tight properties promote and nurture entrepreneurial behaviour; the human resource management system is a valuable tool to encourage and reinforce entrepreneurial behaviour; training should be continuous, less structured and

focused on individualised knowledge requirements; high importance is placed on the empowerment of people to allow them to act creatively and to fulfil their potential; authority and responsibility are decentralised; and business is structured with clear communication of employees' roles and responsibilities, and is supportive.

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ESKOM'S FINANCIAL POSITION 1996 TO 2009: A HIGH LEVEL REVIEW

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ABSTRACT

Eskom is one of the key public entities in South Africa and provides most of the electrical power in the country. During the last number of years there have been some disturbing trends and problems at Eskom. This paper reviews the annual financial statements of the company over the period 1996 to 2009 and investigates whether the financial aspects highlight any worrying trends and compares the company's performance with a group of international peers. The findings of this report are that employee costs are significantly higher as a percentage of revenue than for the international peer entities. There has been a significant increase in unit costs that have not been translated into higher selling prices. In terms of capital structure Eskom is aligned with international trends. Lastly the government should reconsider Eskom paying taxation and dividends.

INTRODUCTION

During the last number of years Eskom has been in the news frequently, usually for the wrong reasons. Some of these reasons included a generation crises, financial problems and

huge electricity selling price increases. There is a very negative perception from the public and most people will agree that there seems to be significant problems at the entity.

This study will review the annual financial statements of Eskom from 1996 to 2009 using financial ratios to determine whether there are indications of the reasons for the problems experienced from a financial management perspective. As a high level review this study will not attempt to investigate specific aspects in depth, but will try to identify possible problem areas for further investigation.

The problem that this study aims to investigate will be stated in the next section. Thereafter research objectives will be formulated and a review of literature will be given. In the following section the research methodology will be described including the limitations inherent in a study of this nature. Next the results and findings of this study will be discussed and finally conclusions and implications of the findings will be discussed.

PROBLEM INVESTIGATED & RESEARCH OBJECTIVES

Firstly this paper will aim to establish whether the financial management at Eskom, or the lack thereof, contributed to the problems facing Eskom today.

This problem will be addressed by:

- analysing the key financial ratios and trends for Eskom from 1996 to 2009;
- comparing the financial ratios to similar organizations worldwide, these organisations will be termed “international peers” in this paper.

Secondly the impact of the payment of taxes and dividends from 2000 to the government on the current financial situation facing the company will be considered.

LITERATURE REVIEW

Due to the specific nature of this study literature on this topic is very scarce.

A study considering some aspects of this study that also looked specifically at Eskom was done in 2003 by Eberhard and Mtepa. Their study considered the fact that the low prices charged by Eskom at the time did not necessarily mean that Eskom was using its resources efficiently. They felt that this was largely due to the fact that Eskom had not had to invest in generation capacity for many years. This seems to be borne out by current events where Eskom is asking for large price increases to be able to fund an expansion in generation

capacity. They also indicated that the primary energy costs of Eskom were much lower than international levels.

Eberhard and Mtepa (2003) also considered the history of Eskom and found that Eskom originally operated on a break-even basis. In 1987 this was changed to a basis of ensuring that the electricity needs of the consumers needed to be met in the most cost effective manner. In an interview Reuel Khoza (Mangaliso, Nkomo, 2001), the then chairman of the board of Eskom, said that his predecessor was told to transform the organization into a bottom-line organisation. When he became chairman he was told to change Eskom into a globally competitive organisation to be able to face international competition. Eberhard and Mtepa (2003) went on to say that at the time an excess of generation capacity existed and most of this capacity was removed by the decommissioning of power plants and other measures.

In post apartheid South Africa Eberhard and Mtepa (2003) found that a massive electrification programme was initiated to bring electricity to the people which increased the proportion of the population that had access to electricity from one third to more than two thirds. The study further indicated that in 2001 Eskom was converted to a public company that was wholly owned by the government, which is still the case today. It is at this stage that Eskom started to pay dividends and taxes. The study found that:

“Generally, from 1980 to 1986 more than half of Eskom’s costs were capital related. Subsequently, there was a decline in capital-related costs that brought about a significant reduction in the price of electricity (about 3.2% per annum on a average).” (Eberhard, Mtepa 2003:88)

Eberhard and Mtepa (2003: 91) concluded that Eskom’s electricity prices were low by international standards. Their analysis found that this was due to the fact that Eskom had not had to invest in generation capacity for many years. It could be argued that Eskom should have charged higher rates at the time which would have allowed them too accumulated resources for future expansion programmes, like those currently in progress.

Hansen (2000) found that if Eskom took into account the effects associated with pollution it was undercharging by an average of 63%. If South Africa applied the stringent regulatory regimes regarding pollution that applied in the United States and Europe the cost of South African electricity would rise by 40%.

Eskom is a regulated company. The prices they charge are set by the National Electricity Regulator of South Africa (NERSA). De Fraja and Stones (2004:79) investigated the capital risk and capital structure of a regulated firm. They found that the regulator should consider the optimal capital structure of a regulated firm as this has an effect on the cost of capital and thus also the price paid by consumers. They found that regulators in the United Kingdom generally assumed a leverage of 50% for public electricity suppliers and 60-70% for the National grid company. De Fraja and Stones (2004:80) indicated that a utility with too much debt would imply too much variability of the prices paid to consumers. They also felt that a “not-for-profit” company, like Eskom requires a buffer in the form of liquid reserves to protect consumers and lenders from economic instability due to the cost of debt.

Spiegel and Spulber (1994) and Spiegel and Spulber (1997) considered the capital structure of a regulated company. Although their study focused on privately owned companies they state that the reason many utilities are highly leveraged is due to the fact that their high level of leverage increases the regulated prices. This is generally because the allowed rate of return for these companies is based on an average of the costs of debt and equity. As the regulators take the cost of debt into consideration when determining prices Spiegel and Spulber (1997:17) found that at equilibrium, a regulated firm’s debt is completely riskless and therefore regulated firms tend to use a high percentage of debt.

Spiegel (1997), Zajac (1972), and Westfield (1965) looked at the capital structures, technology and “gold-plating” that is used by regulated firms to maximise profitability. “Gold-plating” is the inefficient use of resources to maximise the regulated price. They generally found that high levels of debt, high fixed cost technologies and inefficient and wasteful expenses are sometimes used by regulated firms to increase the regulated price as the regulated price is often linked to a firm’s cost of capital and a fair rate of return. Although the specifics of the models they created falls outside the scope of this paper, these factors should be considered when analysing the financial results of Eskom.

As indicated earlier there has been some very negative publicity in the news media including allegations that the bonuses of Eskom managers were to blame for the generation problems experienced (Fin24.com, 2008a).

Jac Laubscher is quoted in an article on Fin24.com (2008b) that part of the then 53% increase in electricity tariffs Eskom was asking for was due to the fact that they were trying to restock their coal reserves and he felt that that was unfair to the consumer. In the same article Laubscher also states that Eskom’s tariff structure was not sustainable and that the

lower coal stocks in the previous financial year increased the amount of dividends the government received from Eskom. Laubscher continues that as Eskom's sole shareholder the government could not distance itself from Eskom's financing requirements. He argues that the increase in capacity of Eskom will lead to higher future earnings and higher dividends that the government will receive. Due to this fact he feels that the government should play a larger role in financing Eskom and assisting it through the company's current financing requirements.

De Klerk (2008) stated that Eskom's return on assets in 2007 was 7.8% which is less than its cost of capital. He continues to say that the assets are severely undervalued and that the actual, fair value related return on assets would be closer to 3%. He feels that due to this fact alone, only a significant price increase in the cost of electricity to the customers of Eskom would be a viable way to fund the expansion programme.

Sake24.com (2010) stated that the Democratic Alliance's spokesperson for public enterprises disclosed in an Eskom report to Parliament that 35% of electricity delivered to households is stolen and that Eskom is only paid for 26% of electricity supplied to Soweto. This can only put a significant strain on the financial resources of Eskom.

RESEARCH METHODOLOGY

The main source of information for this study will be the Eskom annual reports from 1996 to 2009 (Eskom, 1996 - 2009). The company financial information will be used, not the group, as the group includes subsidiaries that are not directly involved in the electricity supply industry. Certain information was not disclosed for all of the years under review and this will be highlighted in the specific findings. Data is only comparable from 1996 as that was when the homeland (Transkei, Ciskei, Bophuthatswana and Venda) electricity supply companies were incorporated into Eskom. During 2005 the company had a 15 month year due to the change of its financial year end from 31 December to 31 March. All income and expenses for that period have been adjusted to a twelve month equivalent.

Financial information was taken from the annual financial statements and certain ratios that appeared in the financial statements will be used. In very specific cases inflation will be taken into consideration, specifically when looking at the average remuneration of employees. Generally however ratio analysis by its nature does not require adjustments for inflation.

The key ratios identified will be discussed next and thereafter a short description of the organisations that will be used for comparison purposes will follow.

Key ratios

Gross profit

In the Annual Report of Eskom for the period 1996 to 2009 the average selling price in cents per kilowatt hour and the average cost per kilowatt hours is given. These will be compared looking at the changes in gross profit over the period. The increases in these values will also be considered and compared to the same period's consumer price index (CPI) and producer price index (PPI) as determined by Statistics SA. The total increase over the period will also be considered. This information is not disclosed by any of the entities analysed and thus no comparison can be made with other companies in this sector.

Employee Benefits

The growth in employee benefits per employee will be calculated for the 1998 to the 2009 year. The total employee costs will be divided by the total number of employees in the annual report to calculate the average benefit per employee. This amount will be adjusted for CPI inflation, as wage increases are normally linked to CPI inflation, and for the nominal labour unit costs in the non-agricultural sectors as determined annually by Statistics SA.

Specific costs as a percentage of revenue

Managerial, technical and other expenses, employee benefits, directors emoluments and finance costs will be calculated as a percentage of total revenue.

The trends will be analysed over the period 1998 to 2009 and also compared to the international peers and Transnet.

Working Capital Management

An analysis of the working capital cycle can give one a good indication of the financial management within an organisation. The average debtor's collection period, the stock days on hand and the average payment period will be calculated for the period 1996 to 2009. This will be compared to the international peers.

Solvency and Liquidity

The capital structure, solvency and liquidity for the 1996 to 2009 period will be calculated and analysed. This will be compared to the same ratios in the international peers and Transnet.

Profitability

The profitability of Eskom will be analysed by looking at the net profit percentage (before interest and tax), return on assets and the net cash flow for the period 1996 to 2009. This will be compared to the international peers.

Comparative organisations

The organisations that will be used for comparison purposes were selected based on, amongst others, electricity organisations of a similar size (Vattenfall, Korea electric power corporation (KEPCO), E.On, TEPCO, EDF and RWE), state owned electricity companies (Saskpower, HydroOne, Meridian, EDF and Fortum) and companies from similar economies [TNB (Malaysia), NTPC (India) and RAO UES (Russia) and AGL (Australia)]. Their details are given in Table 1. The 2009, or latest available if before 2009, annual report of these companies were used.

Limiting factors

There are certain limiting factors when performing an analysis of this type. The following are the main factors that should be considered.

Comparability

The comparability of information from one company to another and even from one period to another for a specific company cannot always be assured.

Firstly companies are not always comparable due to the fact that they have different generation mixes (Nuclear, fossil fuels etc.), different product mixes (Mixtures of generation, transmission and distribution), other services or products they supply (gas, oil, consulting services and heat) and different economies and social constraints (Environmental regulation, developed vs. developing countries etc.). The companies used for comparison purposes have been chosen to negate as much of these factors as possible by using a number of different companies. Where possible only the electricity related revenues and costs were considered.

Secondly in the preparation of the annual financial statements Eskom itself might not always classify items in the same way. Different companies due to legal or practical purposes also may not classify items in exactly the same way. In this way a cost may be allocated to different line items in different years or for different companies.

Finally the comparison will only be made based on the 2009 financial year. A longer term review and comparison may give different results. A extensive review like that would however make any sensible comparison much more complex which would include matters like changes in exchange rates, different rates of inflation and the availability of data.

Name of Entity	Place and type of business operations	Ownership	Generation methods
RAO UES	Russia, generation, transmission and distribution	52.7% Russian Governme nt	Gas and Coal
EDF	European countries	84.48% French Governme nt	Various
TEPCO	Japan	Public	Hydro, thermal and nuclear
E.On	Energy company in Germany, Central Europe, UK, US and Nordic countries	Public	Mainly nuclear and coal
Korea electric power company (KEPCO)	Korean Transmission and distribution	51.07% Korean Governme nt (Effectively)	None
RWE	European electricity and gas company	Public	Fossil fuel and nuclear
TNB	Malaysia & Region.	Public	Coal and gas
AGL	Australia	Public	Renewable, gas and coal
Vattenfall	Nordic countries and northern Europe	Swedish state	Fossil, nuclear and Hydro
Fortum	Nordic, Russia and Baltic Rim	Finish Governme nt 50.76%	Hydro, nuclear and biomass.
NTPC	Indian generation and distribution	Governme	Coal

	company	nt of India 89.5%	
Meridian	New Zealand Generation & Distribution	New Zealand Government	Hydro and wind
Saskpower	Saskatchewan province, Canada generation & distribution.	Government	Hydro and natural gas
HydroOne	Transmission and distribution in Ontario, Canada.	Ontario province.	None

Table 1 – Details of international peers.

Changes in accounting standards

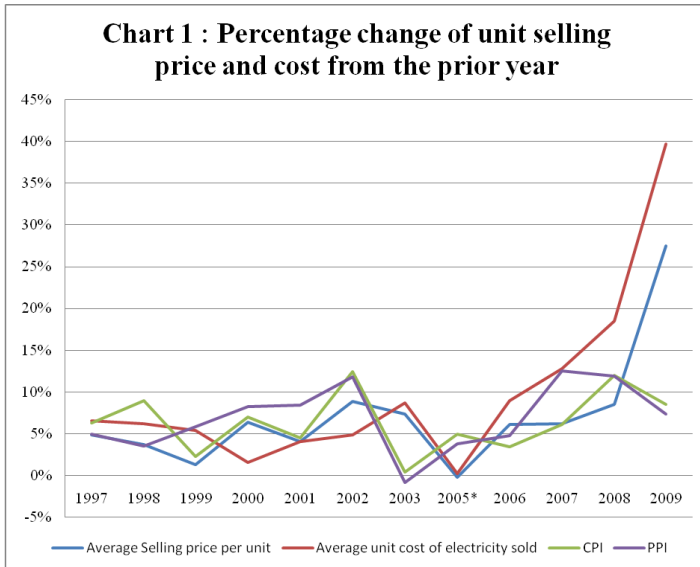
During the period 1996 to 2009 there have been significant changes in the accounting policies used by Eskom which included some major revisions of accounting standards by the International Accounting Standards Board. The impact of these changes could also affect the comparability of the information.

RESULTS

Selling price and cost per unit

The change in average selling price and average cost price per unit (c/kWh) is shown in chart 1. The average selling price increased by a total of 121% between 1996 and 2009. Average costs increased by 192% over the same period. Thus average cost increased by 71 percentage points more than average sales. During the same period CPI inflation was 209% and PPI inflation was 216%. It can thus be seen that both the selling and cost price rises were below inflation. It is also clear that the increases in costs were not translated into increases in selling prices.

Most of the cost increase was however during the 2006 (9%), 2007 (13%), 2008 (19%) and 2009 (40%) financial years. Between 1996 and 2005 the increase in costs was 44% while the increase in selling price was 42%. This leads to the conclusion that until 2005 Eskom's costs and selling prices followed a similar trend, the large difference in increases was thus mainly in the period 2006 to 2009, four of the fourteen years analysed.



The mark-up over the period 1996 to 2009 changed from 19% to a negative 10%. The mark-up reached a maximum of 20% in 2002 and the average over the period was 13%. 2009 was the lowest mark-up over the period. This again seems to indicate that the problems started after 2005 when the mark-up was still 15% even though the average unit cost had risen higher than the average selling price in 2003.

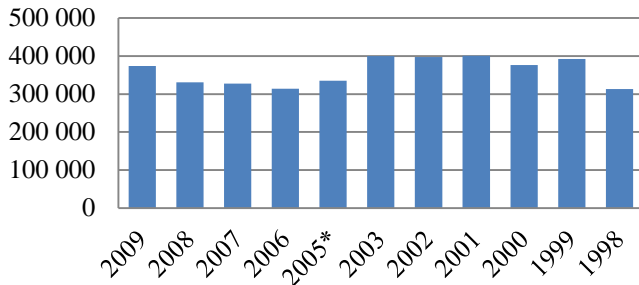
Employee benefits per employee

Employee benefits were only disclosed between 1998 and 2009 and the analysis is thus limited to that period. Between 1998 and 2009 the average employee benefit per employee increased from R124 259 to R373 960 per annum. This equates to an increase of 201%. If these figures are adjusted for CPI inflation the increase is 67% more than a CPI adjustment would have been.

Statistics SA also publishes a nominal unit cost in the non-agricultural sector which is a measure of employee cost inflation (The term employee cost inflation will be used in this section). If the average employee benefit per employee is adjusted for this measure, the increase in salaries are still 19% more if these costs were adjusted only for the employee cost inflation in South Africa.

The average annual benefit per employee, adjusted for the employee inflation, is given in Chart 2. Based on these figures the average remuneration during the period equated to R360 046 per employee per year. The lowest average employee benefits were R313 000 in 1997 and 2006 and the highest in any period was R400 076 per employee per annum in 2001.

Chart 2 : Average Salary per employee (Adjusted to 2009 nominal unit cost values)



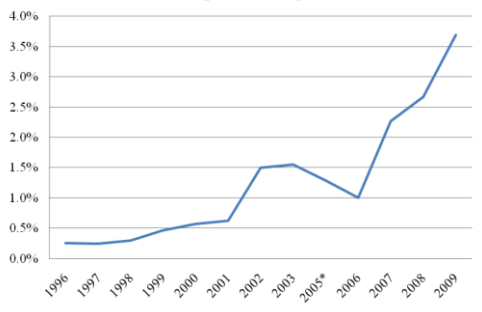
Although it is clear that Eskom's level of benefits to their employees have increased more than the average for South Africa there are many factors that could have been the cause for this. One reason could be that the mix between high level and low level employees has changed over the period. It is interesting to note that Eskom had 37 311 employees in 1998 which reduced to 34 027 employees in 1999 and reached a low point of 29 969 in 2001 (Also the year that had the highest average benefits per employee). In 2009 the number of employees reached the same levels as in 1998 of 37 857 employees (1998 37 311 employees) (Eskom 2009).

Specific costs as a percentage of revenue

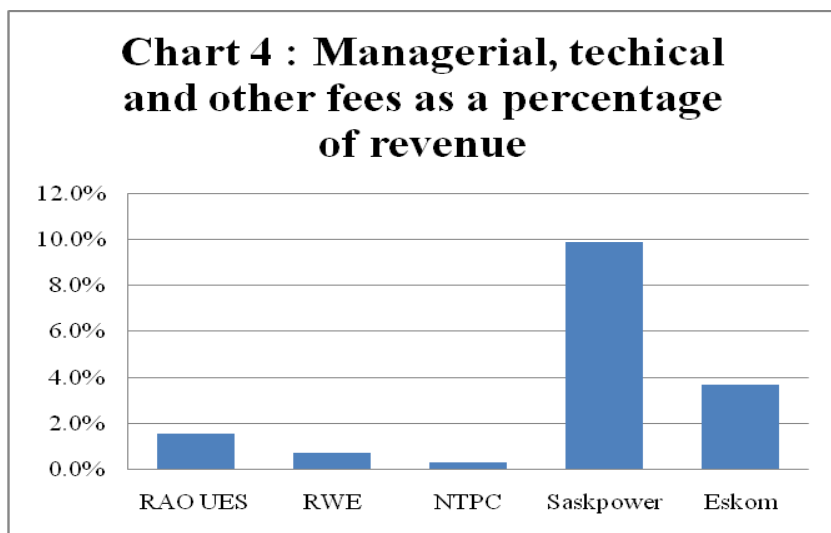
Managerial, technical and other fees

The managerial, technical and other fees as a percentage of revenue were 0.3% in 1996 and rose to 3.7% in 2009. The average over the period is 1.3% and the highest point was in 2009 at 3.7%. The increase in this percentage can be seen in chart 3. This increase is quite alarming as it could indicate a significant loss of internal professional skills which had to be sourced externally.

Chart 3 : Managerial, technical and other fees as a percentage of revenue

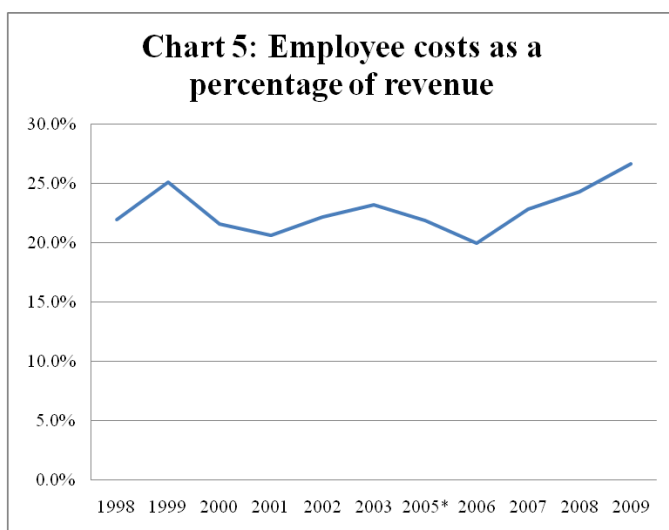


When one compares this percentage to the international peers of Eskom one sees that the average for these organisations is 3%, Saskpower has the highest percentage (9.9%). It is important to note that only four of the international peers disclose this figure, as shown in Chart 4. This also means that the high percentage of Saskpower skews the average as the other three organisations' percentages are significantly lower than that of Eskom.

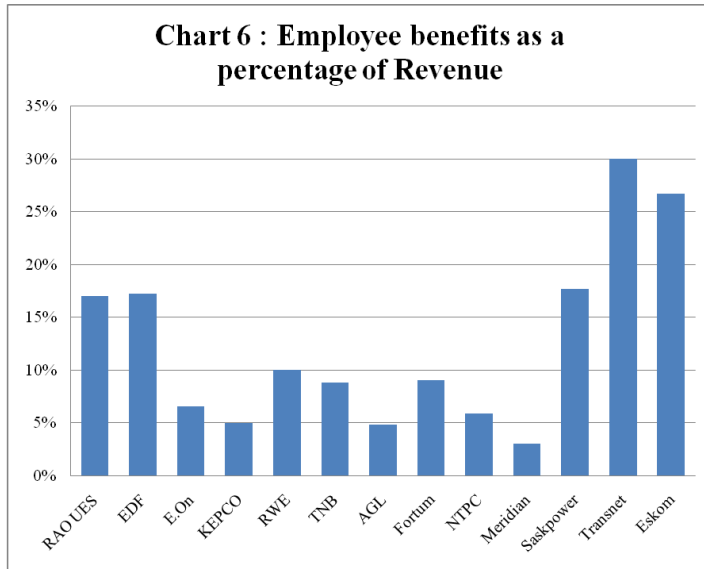


Employee costs

As seen before the employee costs of Eskom have remained similar over the period in real terms. When one however compares the employee costs to revenue, there has been a significant change from 22% in 1998 to 26.7% in 2009 which is also the highest percentage over the period. The information is summarised in Chart 5.

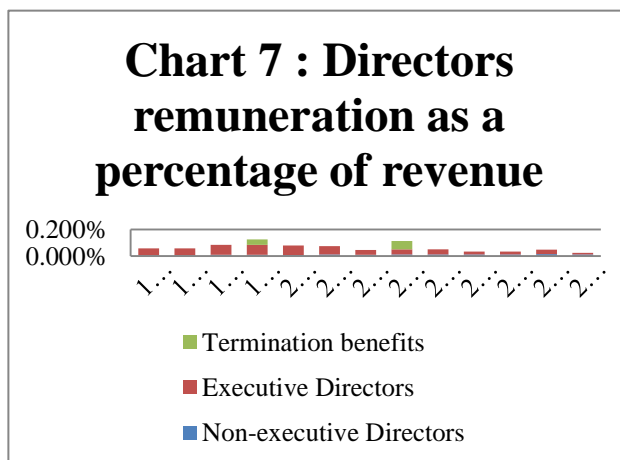


As a comparison Transnet's employee costs as a percentage of revenue is 30% and the average of the international peers are 10%, with Saskpower the highest at 18%. This is summarised in Chart 6.



Directors' emoluments

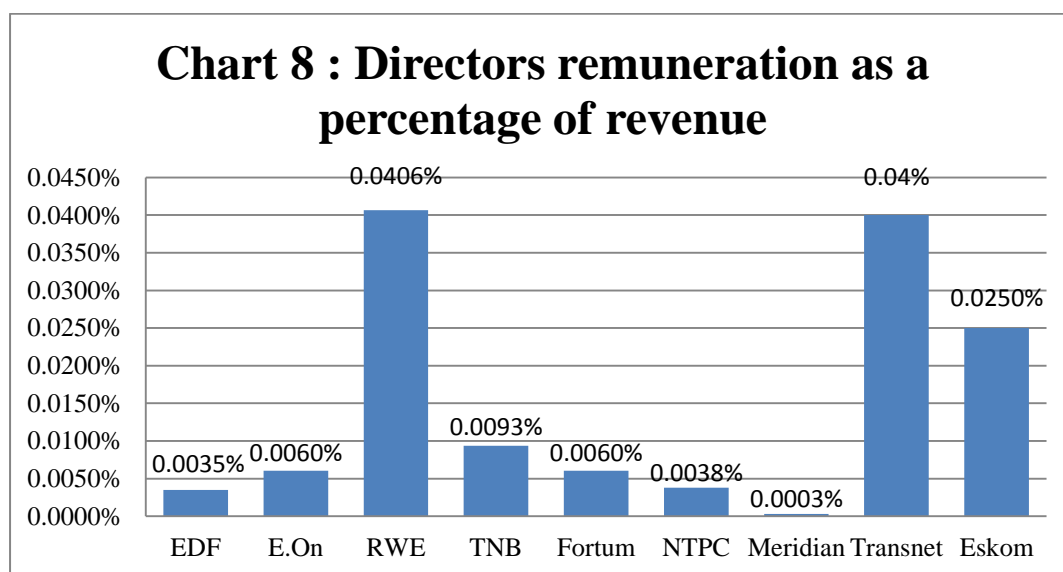
The director's remuneration averaged 0.065% of revenue in the period 1996 to 2009. If the termination benefits of R20 million in 2003 and R9 million in 1999 is excluded the average is 0.055% per annum. The highest percentage in a year without termination benefits was 0.085% in 1998 and the lowest 0.025% in 2009. The remuneration of executive directors averaged 0.046% over the same period with a high point of 0.076% in 1998. Non-executive director's remuneration averaged 0.011% per annum of revenue with the highest percentage 0.015% in 2005. This information is shown in Chart 7.



The director's remuneration of Transnet comprises a total of 0.04% of revenues in 2009, compared to 0.025% for Eskom. Transnet's non-executive directors remuneration was

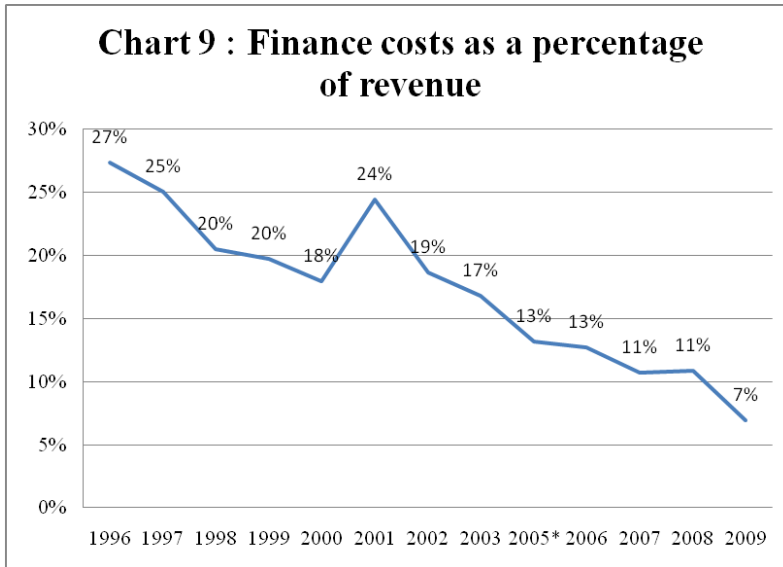
0.012% identical to Eskom's 0.012%. The executive director's remuneration was 0.028% for Transnet compared to the 0.013% for Eskom. It should however be borne in mind that executive directors of Eskom earned 0.034% of revenue in 2008.

When one compares this information to that of Eskom's international peers Eskom it makes for very interesting reading. Only seven of the peers disclose Directors Remuneration. Of those the average remuneration is 0.01% of revenue. The highest percentage is that of RWE 0.04% of revenue and the lowest at 0.0003% of revenue for Meridian. It should be borne in mind that over the period 1996 to 2009 Eskom's director's remuneration averaged 0.065%. This information is shown in Chart 8.

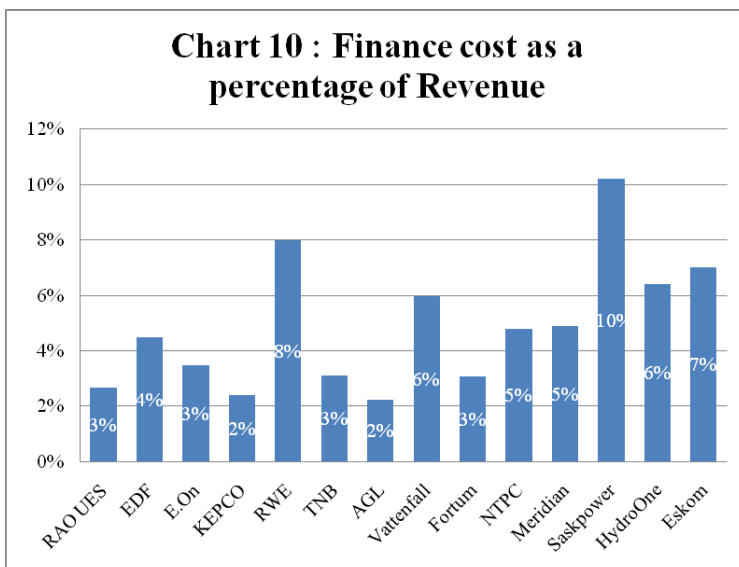


Finance Costs

During the period 1996 to 2009 the finance costs of Eskom averaged 17% of revenue. It has declined from 27% in 1996 to 7% of revenue in 2009. This could be due to the lower interest rates, in 1996 the average interest rates (dividing finance costs by total liabilities) was 16%, this declined to 3% in 2009. In the same period, debt rose from R31 877 million to R139 724 million. This is shown in Chart 9.



When one compares Eskom's 7% to Eskom's international peers the highest finance cost as a percentage of revenue is 10% of Saskpower, the average for these peers are 5%. Eskom's finance cost as a percentage of revenue is thus comparable with its international peers. The comparison can be seen in Chart 10.



Working capital management

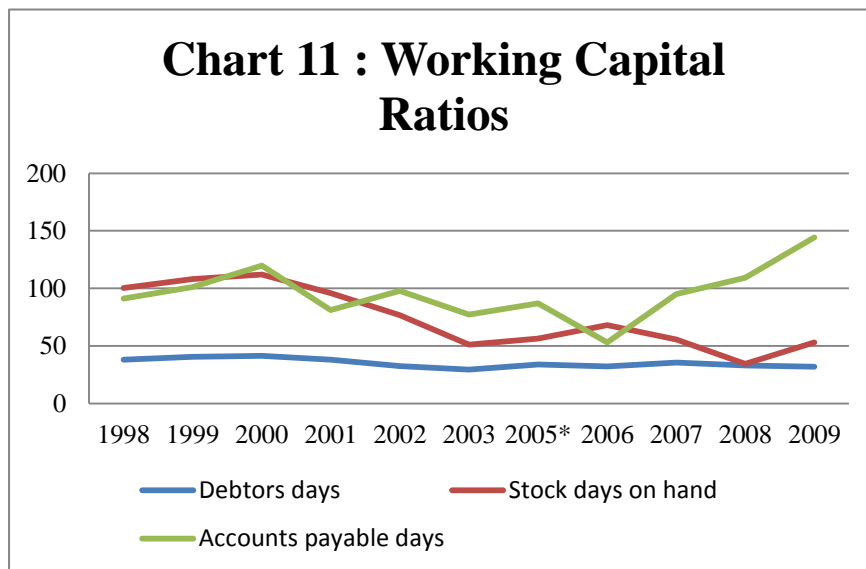
The debtor's days for the 1998 to 2009 period averaged 35 days. This would indicate that consumers generally pay within one month of receiving their invoices. The highest point for this ratio was 41 days in 1999 and 2000 and the lowest point 30 days in 2003. This would seem to indicate that credit control at Eskom has been reasonably stable over the period.

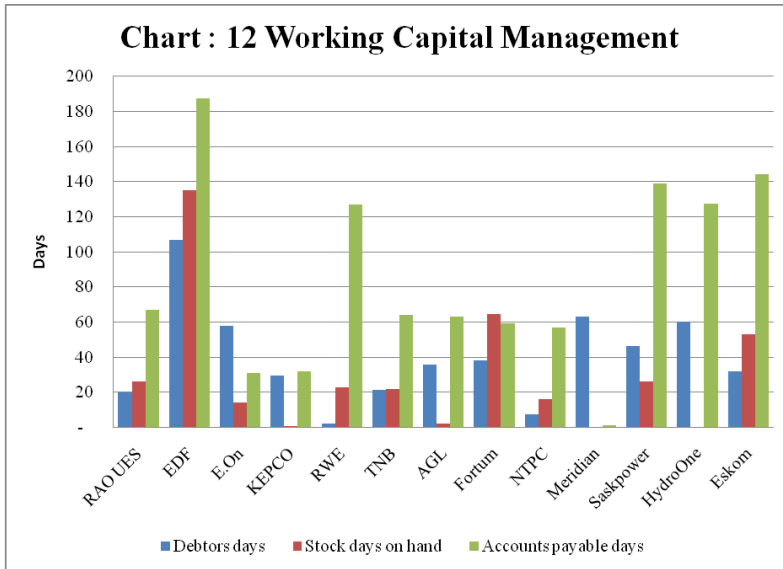
The international peers of Eskom average 41 days, Eskom thus compares favourably with its peers in this regard.

The stock days on hand averaged 74 days (this includes coal and nuclear fuel stock). This reached a high point of 112 days in 2000 but in 2008 they only had 34 days fuel on hand (see the discussion of this in section 4). This would indicate some significant variability and may indicate a lack of proper control over stock levels. If one excludes those entities with no stock from the international peers the average days of fuel on hand is 37 days. One should however consider that a number of these peers rely on non fuel generation techniques like hydro-electricity and wind power.

The Accounts payable days is probably the most worrying of the ratios. It has increased to an all time high in 144 days in 2009, where the average for the period is 96 days. This could indicate significant cash flow problems at Eskom. The lowest days outstanding were in 2006 when it was only 53 days. Internationally the peers have an average of 80 days.

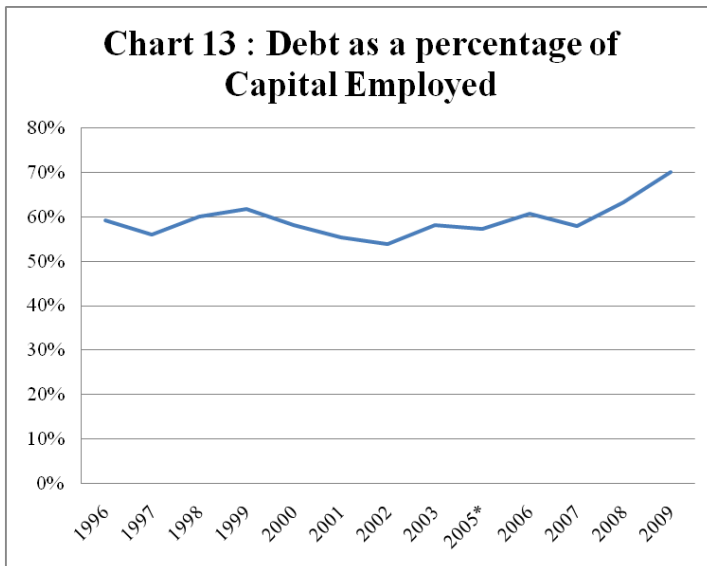
The working capital ratios of Eskom are in Chart 11 and the comparison with international peers in Chart 12.





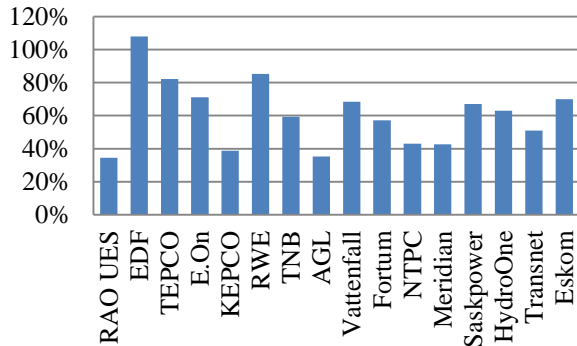
Solvency and Liquidity

The average debt as a percentage of total capital was 59% during the period 1996 to 2009. This percentage reached a high point in 2009 of 70%. The year in which debt was the lowest as a percentage of total capital was 2002 when the percentage was 54%. This can be seen in Chart 13.



The international peers average 61%, with those that are either completely or partially owned by government averaging 58%. This would seem to indicate that electricity companies generally have a high level of debt compared to equity, which supports the hypothesis that regulated companies prefer the use of debt (Spiegel and Spulber 2004 and 2007). Transnet's percentage is 51%. Eskom's debt as a percentage of equity is thus comparable with its international peers. This is shown in Chart 14.

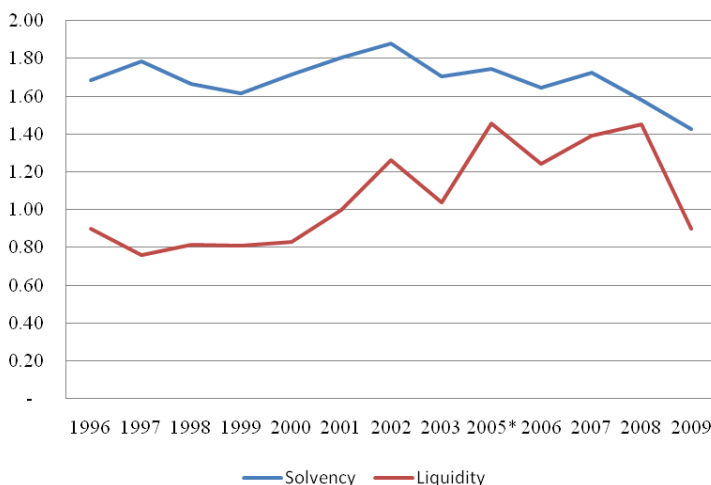
Chart 14 : Debt as a percentage of total capital

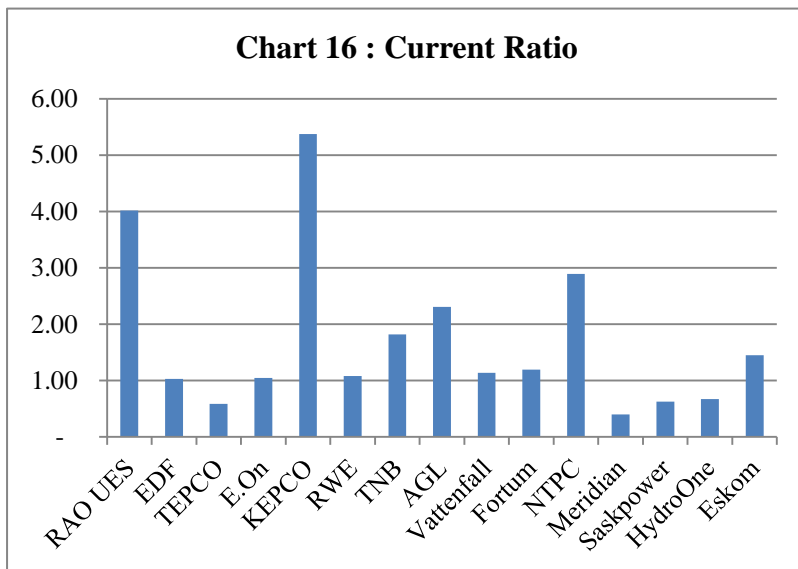


The solvency ratio of Eskom averaged 1.69:1 over the period 1996 to 2009. The highest solvency ratio was 1.88:1 in 2002 and the lowest 1.43 in 2009. The international peers average 1.83:1. If one only considers those which are partly or wholly government owned the average is 1.93. RAO UES and KEPCO however have very high solvency ratios and if those are excluded the peers' average 1.69:1, strangely the same as Eskom's in 2009. Eskom would seem to be as solvent as its peers.

In terms of the current ratio Eskom averaged 1.07:1 between 1996 and 2009. The highest current ratio was 1.45:1 in 2009 and the lowest ratio was 0.76:1 in 1997. In 2009 Eskom's current ratio was 0.90:1. (See Chart 15) The international peers average 1.72:1 for their current ratios. If one only considers those that are government owned but excludes RAO UES and KEPCO that have very high current ratios (4:1 and 5.3:1 respectively) they average 1.13:1. Eskom's current ratio seems to follow the same type of trend. (See Chart 16).

Chart 15 : Solvency and Liquidity

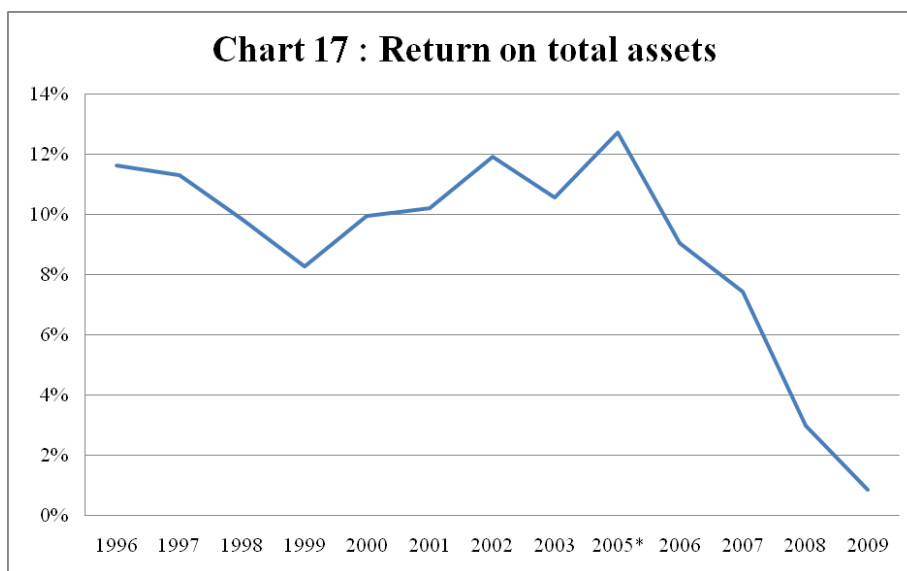




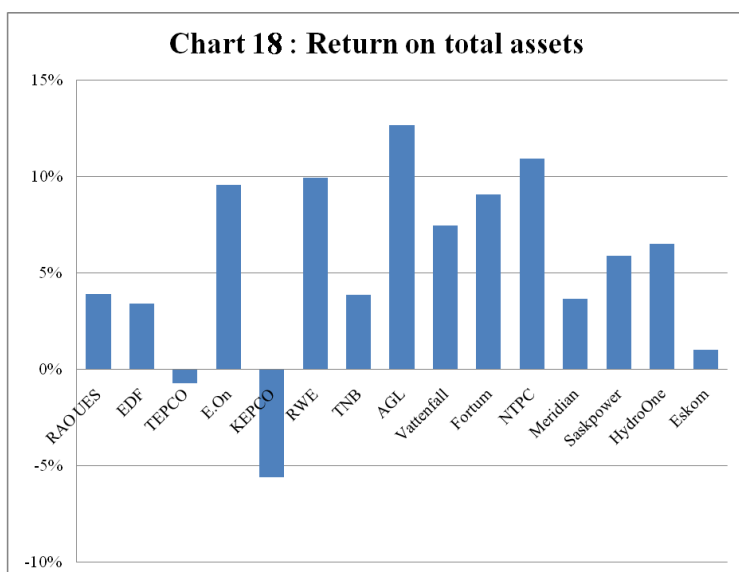
It can be concluded that in terms of capital structure, solvency and liquidity Eskom’s position is in line with its international peers.

Profitability

Profitability was looked at using the return on total assets as disclosed in the annual reports of Eskom (Eskom 1996 to 2009). Eskom’s return on assets averaged 9% between 1996 and 2009. The highest return was achieved in 2005 of 13%. The return reached an all time low in 2009 of 1%. This can be seen in chart 17.



Eskom does not compare favourably with the international peers in 2009. Although it should be borne in mind that they had an especially bad year in 2009 and they average 9% in the period under review. This is represented in Chart 18.



Taxation and Dividends

As discussed previously Eskom started paying taxes in 2000 and dividends from 2002 to 2006. During this period taxes in the amount of R9 488 million were paid and dividends to the value of R4 404 million were paid. If this money had been reinvested in Eskom and the return on assets could have been achieved thereon this amount would have been worth R18 964 million, if prime could have been achieved it would have been worth R25 167 million, at the end on the 2009 financial year. This could have made a significant dent in the amount of funding Eskom requires. The prime rates and Return on Assets that were used are given in table 2. Each year's amounts are "invested" in the rate achieved in the subsequent year. The extra cash that would have been available are then compounded with the next financial year's expense.

	ROA subsequent year	End of year prime (Subsequent)
2008	0.84%	13.00%
2007	2.97%	14.50%
2006	7.44%	12.50%
2005	9.06%	10.50%
2003	11.67%	11.00%
2002	10.58%	11.50%
2001	11.92%	17.00%
2000	10.10%	13.00%

Table 2

CONCLUSIONS AND IMPLICATIONS

It needs to be emphasised that this was a high level review and information was only reviewed at a high level and no attempt had been made to investigate the numbers in detail. Key areas of concerns could however be identified. Further analysis and research will however be required to reach a conclusion on whether the financial management at Eskom contributed to the problems they experienced.

The key areas that has come to the fore is the translation of increases in inputs into increases in selling prices, employee costs and directors remuneration that are much higher as a percentage of revenue than the international norm, accounts payable (and thus probably cash flow) management and the fact that Eskom should invest money in good years when capital expansion is not required to help fund expansions when required.

It would also appear that the government as the sole shareholder of Eskom should reconsider, at least in the next couple of years, whether Eskom should be required to pay taxation or dividends to assist the organisation in financing the expansion programme.

This research, although at a high level, is important as the management of Eskom is critical to the future growth of South Africa. If Eskom fails to supply power to its customers the economy of South Africa would be damaged. The failure of Eskom would probably mean that taxpayer's money would have to be used to fix the entity which could increase tax rates which could further curtail private sector growth.

The management implications of this research to date are that the management of Eskom should seriously consider certain aspects of their business. It would appear that current employee costs and directors remuneration levels have hurt the entity and contributes to the lack of profitability. Furthermore high levels of managerial and other services would indicate that the in-house skills of Eskom may not be enough. Outside skills also tend to cost more than in-house skills.

The management of Eskom must also, after the current expansion programme has been finalised, ensure that the selling price of electricity includes a reserve to fund future capital expansion.

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**THE RELIABILITY OF DATA FROM GUEST REVIEWS ON TRIPADVISOR AS A
CONTEMPORARY SOCIAL MEDIA PLATFORM**

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Keywords: Guest reviews, Social media Platform, Reliability of reviews

Abstract

The rise of social media created different platforms that allow hotel guests to write reviews about their hotel experience and quality. This study investigates the reliability of guest feedback on TripAdvisor that has over 11 million members and over 30 million reviews. The reliability of data from guest reviews on TripAdvisor was explored through a sample that included 11 destinations and 330 hotel guest reviews. Four theoretical arguments that challenge the reliability of TripAdvisor have been used to structure and triangulate the findings. Major findings indicated that although it is possible to post false reviews on TripAdvisor it does not happen on a scale that allows manipulation of hotel rankings. Although reviewers do not always agree, the context in the majority of the reviews allows for readers to identify the quality of a hotel. It was concluded that TripAdvisor provides a reliable and rich source of information for hotel guests and other online users.

1. INTRODUCTION

Hotel rating is a concept that has received very little academic attention over time, whereas its practical systems have frequently been subject to differences of opinion as to what it is the guests want or need and how this can objectively be measured (Lopez and Serano, 2004; World Tourism Organisation, 2004). From the early stages of rating, then commonly referred to as classification, it has been non-guests that determine the quality of a property.

With the rise of social media, different platforms have been created that allow hotel guests to write reviews about their hotel experience and quantify their satisfaction at the same time. Through such a platform, it is guest feedback that dictates the rating of a hotel. As service quality theory dictates that quality is the outcome of the guest perception of a delivered service, this could be argued to be the most accurate way to provide potential guests with a realistic expectation. The question can however be posed whether a platform such as TripAdvisor provides reliable data to allow guests to form accurate expectations of the hotel?

This study will focus on TripAdvisor, which is the world's largest platform for consumer travel feedback (TripAdvisor, 2009). This paper will firstly present TripAdvisor as a platform for guest feedback. A description of the organisation TripAdvisor, the traveller services it offers, and the process, by which ratings, reviews, and rankings on TripAdvisor are established, will first be provided. Then the findings regarding the reliability of TripAdvisor will be presented by showing the TripAdvisor screening algorithm. Thereafter the number of ratings and reviews, the standard deviation of the ratings, the consistency of the reviews, the context of the reviews, the credibility of writing styles in reviews, and the types of hotels found in the

sample will be discussed. These discussions explain the reliability of TripAdvisor as a platform to provide accurate data to potential guests.

2. PROBLEM INVESTIGATED

Although rating of hotels is a rather young concept, its practice has grown rapidly. From the initial purpose of informing guests on basic facilities that can be expected, the objective of hotel rating has developed into one that focuses on a tourism destination as a whole. Tourism lodging has a major impact on the tourist experience resulting in government involvement in hotel rating in more than half of all countries worldwide. Initially the focus of rating systems was limited to minimum criteria that were objective in assessment: room size, facilities, and availability of services. Later hotel rating systems show an increase in focus on the more subjective areas of the guest experience, such as cleanliness, state of maintenance, and staff competencies. Contemporary systems have moved even a step further and focus on service quality as it would be experienced by the guest.

This focus on service quality as it would be experienced by the guest seems to overcome the limitations of earlier hotel rating systems that only measured a minor part of the guest experience. As one of the main objectives of hotel rating systems is to provide an accurate view of what the prospective guest can expect, this is a positive development. Many contemporary systems seek to measure the service quality criteria by means of 'mystery shopping' where a hotel inspector visits the hotel, where he pretends to be a guest and rates the guest experience. At the same time, some systems have started to use real guest feedback for their rating decisions.

Applying service quality theory to the concept of hotel rating, one can argue that the most accurate representation of the guest experience can only be supplied by real guests having real experiences. With the rise of social media, different platforms have been created that allow hotel guests to write reviews about their hotel experience and quantify their satisfaction at the same time. Through such a platform, it is guest feedback that dictates the rating of a hotel. As service quality theory dictates that quality is the outcome of the guest perception of a delivered service, this could be argued to be the most accurate way to provide potential guests with a realistic expectation.

The four areas of criticism on why TripAdvisor may not provide reliable data are:

- a) TripAdvisor allows anonymous reviews allowing hotels and restaurants to manipulate the ratings system (see for instance ABC News, 2009; Economist.com, 2009; Elliott, 2009; Frommer, 2009; O'Neill, 2009).

- b) TripAdvisor declined to publish a review (Jeff, 2008a) and sensors feedback from hoteliers (McReady, 2010);
- c) TripAdvisor suffers from a conflict of interest as it is owned by Expedia and is dependent on referral and advertising income (Jeff, 2008b, Jeff, 2009); and
- d) Consumers are not objective in their assessment of quality (Hewitt, 2008; Weyel, 2008).

This research therefore seeks to investigate whether these criticism are true by presenting findings of the quality of data that may be expected from guest reviews on contemporary social media platforms such as TripAdvisor.

3. RESEARCH OBJECTIVES

This main objective of this study is to investigate the information (guest reviews) found on TripAdvisor to establish whether it is reliable or not.

Secondary objectives to this study are to describe the services TripAdvisor provides to guests, and how it allows guests to post reviews with ratings on the website for other guests to read. Another secondary objective is to explain the process by which ratings, reviews and rankings on TripAdvisor are established and how the TripAdvisor screening algorithm works.

In order to determine the reliability of TripAdvisor, the following research questions provide the information to answer the research problem:

- How does TripAdvisor allow guests to review hotels?
- How reliable are the guest reviews and ratings on TripAdvisor in providing an accurate picture of guest experiences in a hotel?

4. LITERATURE REVIEW

TripAdvisor had over 11 million members and more than 30 million reviews in December 2009. TripAdvisor Media Network is part of the Expedia Group, a public company traded at the NASDAQ stock exchange. TripAdvisor was founded in February 2000 by Steve Kaufer and operates sites in the U.S., the U.K., France, Ireland, Germany, Italy, Spain, India, Japan, Portugal, Brazil, Sweden, The Netherlands and China. Despite the relatively large amounts of site visitors and reviews posted on the website, the organisation is relatively small with an estimated number of staff of just over 300 in December 2009. (Larpent, 2009b)

4.1 The Organisation TripAdvisor

Although guests may access the website hosted in their own language, guest reviews appear to be collected to and distributed from a central database as they can be found in different languages and are the same on the different sites. This was verified with a cross check between www.TripAdvisor.com and <http://nl.TripAdvisor.com> in September 2009. The credo up to November 2009 was 'Get the truth, then go', after which it was changed to 'World's most trusted travel advice' (TripAdvisor, 2009). A possible reason for this change could be the criticism on the reliability of ratings and the objectivity of TripAdvisor (Elliott 2009; Frommer, 2009; Jeff, 2008a; O'Neill 2009).

TripAdvisor generates income through advertising and referrals. TripAdvisor's main source of income is referrals to online travel agents that pay per click (PPC) for referrals. When a visitor of the website clicks to get actual rates, or to get more information on the facilities of the properties (hotel, guest house, etc.), user is referred to one of the online travel agents that TripAdvisor has agreements with, such as: Expedia.com, Bookings.com, Hotels.com, Splendia.com, EasyToBook.com, and Fastbooking.com, Marriott.com and Intercontinental.com (TripAdvisor, 2009). A second source of income is through banners that are posted on the TripAdvisor website. These banners may refer to hotel brands, destinations, or other travel related content. A third source of income that was launched in November 2009 is 'business listings' where hotels can have a direct link from their mentioning on TripAdvisor to the website of the hotel (TripAdvisor, 2009). This is expected to create additional revenues from hotels that are currently not distributing their rooms through Online Travel Agents or Global Distribution Systems.

4.2 Traveller services offered on TripAdvisor

TripAdvisor claims it seeks to provide: "*recommendations for hotels, resorts, inns, vacations, travel packages, vacation packages, travel guides and lots more*" (TripAdvisor, 2009). The website provides information on flights, hotels, and restaurants and additionally provides travel tips and free travel guides. Further, the website allows visitors to create a unique profile where information can be stored and exchanged with other guests. Once a profile has been created, guests can write reviews, rate hotels and restaurants, create a travel map of destinations visited, built 'trips' that store information on destinations, hotels and restaurants, and communicate with other guests .

TripAdvisor displays a range of hotels that appears to be more comprehensive than statistics made available by tourism boards or organizations that seek to provide travel statistics on a commercial basis. The number of hotels in Amsterdam, for instance, according to the City of Amsterdam (2008) was 357 whereas on the first of November 2009 TripAdvisor presents

360 hotels, 151 B&B's / Inns, 67 Special Lodging properties, and 203 vacation rentals. This availability is most likely due to the fact that TripAdvisor allows guests to suggest hotels to be added to its database.

When searching for a hotel, TripAdvisor offers a comprehensive filter that allows guests to narrow their search down to:

- a) A geographical area using Google maps or a specific neighbourhood;
- b) A price range;
- c) Hotel Class, derived from a conventional rating system (one to five stars);
- d) Amenities that are available (for instance, 'free high speed internet');
- e) Hotel Brand; and
- f) Recommendations to different target groups (TripAdvisor, 2009).

4.3 The process of registration, reviews and ratings, and rankings

Guests need to be registered with TripAdvisor to be allowed to write reviews and give ratings to a hotel when the hotel is registered in the TripAdvisor database. A traveller needs to provide a username, email address, and the town residing in to create a profile (location), though other information, such as name, age, and gender is optional. The registration process is verified by email.

When a hotel is not yet listed on TripAdvisor, the traveller may recommend the hotel for inclusion using a form on the website. After a verification process, TripAdvisor invites the traveller with the an email message to recommend a hotel for inclusion

When rating a hotel, the traveller is first asked to rate his or her overall experience in the hotel on a five point scale by which the score represents from five to one: 'Excellent', 'Good', 'Average', 'Poor', or 'Terrible'.

Then, the reviewer is asked to provide a similar assessment for a number of specific criteria. These criteria however appear to be altered regularly. In March 2010 the criteria used as fixed categories to fill out by guests are: 'Value', 'Rooms', 'Location', 'Cleanliness', 'Service', and 'Sleep Quality'. 'Sleep quality' appears as a new criteria in reviews from February 2010. Fixed criteria used earlier include 'Check in / Front Desk', and 'Business service (e.g., internet access)'.

The final quantitative assessment that is required from the traveller is a yes / no answer to the question: 'Would you recommend this hotel to a friend?'

In terms of qualitative input, the traveller is asked to provide a title that summarizes the review, as well as a full review of at least 50 characters about the hotel stay.

In addition to an assessment of the hotel, the traveller is asked about the demographics of the trip: the purpose of the trip: business or leisure, and who the reviewer travelled with: colleagues, friends, family, or solo. Also the traveller is asked about the purpose of his or her trip, being offered 17 options in early 2010.

4.4 The TripAdvisor Algorithm for screening reviews and determining a popularity index

The process of posting a review is moderated, in order to guarantee high reliability. For example, when a review is frequently posted within 12 hours, it may be 'flagged' after which a moderator from TripAdvisor will need to go through the review manually which may take up to two weeks. A message may be flagged due to insulting language or criteria that may indicate fraud. TripAdvisor uses an electronic algorithm for this screening. This algorithm is not disclosed, but appears to screen the text of the review as well as the IP address of the computer from which the review was posted.

When a message is approved by TripAdvisor, it will appear on the website with the username and location of the traveller that has posted the review as well as the date the review was made. The review additionally provides a direct link to the profile of the traveller that posted the review.

TripAdvisor's ranking of hotels is categorized by destination and is referred to as TripAdvisor's 'popularity index'. The TripAdvisor website explains the popularity index as follows:

"The TripAdvisor Popularity Index incorporates Traveller Ratings, guidebook entries, newspaper articles and other web content to determine traveller satisfaction. Emphasis is placed on the most recent information. We calculate the Popularity Index using an algorithm that takes into account not only individual Traveller Ratings, but also opinions from other content sources on the web (such as guidebooks)."

Larpent (2009b) provided more insight in this algorithm, though the exact weighting is only known by senior staff and programming staff within TripAdvisor. Larpent (2009a) confirms the following weighting factors:

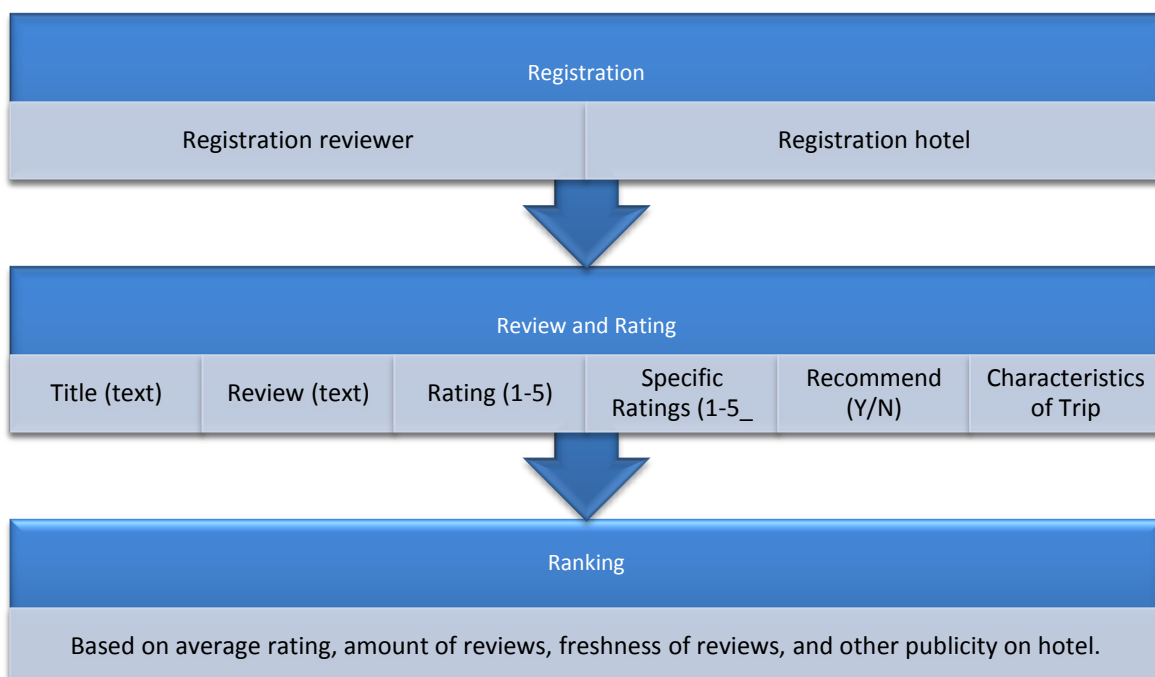
- a) Freshness: newer reviews are weighted stronger than older ones;
- b) Amount of reviews: a property with more reviews, but the same average score will be ranked higher in the popularity index.

TripAdvisor initially used to adjust ratings given with reviews. If a hotel received a first review, it was moderated upwards when it was very low, or downwards when it was very high to avoid the hotel suffering, or benefiting in extreme measures from an initial review. However, early December 2009, this practice seems to have changed as hotels with only a number of ratings do not appear to receive a visible overall rating unless a sufficient amount of ratings confirm the initial ones. This was found to be the case with, for instance, the Stellenbosch Lodge Country Hotel in Cape Town, South Africa that received two ratings early December 2009, but displayed no rating on the website.

One of the main arguments that TripAdvisor has presented in response to several accusations against its reliability is its screening algorithm (Elliott, 2009). The understanding into the effectiveness of this algorithm has been explored by personal use of TripAdvisor and a presentation by and interview with Maud Larpent, Business Development Executive of TripAdvisor, on 1 and 2 December 2009.

The process of registration, reviews, ratings, and rankings is summarised in Figure 1.

Figure 1 Process of registrations, reviews, and rankings on TripAdvisor



Source: *Own model based on TripAdvisor (2009) and the personal use of TripAdvisor.*

5. RESEARCH METHODOLOGY

For the research on the data from TripAdvisor, the overall sample of 11 destinations was specified for the research. The following criteria were adhered to in selecting the destinations:

- a) The destination receives more than one million guests annually;
- b) The destination is represented on TripAdvisor to the extent that further sampling of hotels and reviews is feasible; and
- c) The destinations together cover all continents.

The sample of the 11 destinations focused on the highest ranking, middle ranking, and lowest ranking hotel according to the TripAdvisor rankings. From each of these hotels, the ten most recent reviews in English were downloaded, printed, coded, and content analysis procedures used to analyse the data.

The highest ranking, middle ranking, and lowest ranking hotel were used to gather reviews from TripAdvisor. From each of the 33 identified hotels (three hotels in 11 destinations), the 10 most recent reviews in the English language from the website were selected by using the 'my Trip' function on the website, after which the 10 reviews could be printed in a PDF file. This resulted in 33 files each with 10 reviews, providing a total of 330 reviews in total.

The following process was used to code the data and get it ready for analysis:

- a) Each printed review was analysed and colour coded whereby four categories were identified and given a colour:
 - Yellow for comments that express a satisfaction or dissatisfaction without pinpointing a criterion that caused that emotional state.
 - Green for comments that express a satisfaction with a criterion.
 - Pink for comments that express dissatisfaction with a criterion.
 - Blue for comments that could not be categorized in the former three but were important for further analysis. These comments included, agreement or disagreement with other reviews, and information on the trip or specific traveller circumstances that provide additional context to the review.

- b) Per review, the following additional data was captured:
- The title of the review;
 - The date of the review;
 - The home country of the reviewer; and
 - The rating given to the hotel (one to five points).
- c) Per hotel, the number of reviews was recorded.
- d) Per hotel, the average rating and standard deviation of ratings was calculated.

6. RESULTS

To investigate the reliability of the data (reviews) on TripAdvisor, Elliot (2009) argues it important to look at the amount of reviews and ratings posted per hotel. The rationale behind capturing the amount of reviews is that when the amount of reviews is relatively high and the amount of false reviews relatively low, that the distortion by these reviews should be minimal. Table 1 presents the amount of reviews of TripAdvisor's top 10 ranking and the average for these review by destination.

Table 1 Number of reviews per hotel in the Top 10 Ranking of TripAdvisor

Ranking	Amsterdam	Bangkok	Cape Town	Dubai	Hong Kong	London	New York	Paris	Rio de Janeiro	Rome	Sydney
1	102	592	73	207	839	165	94	117	146	103	104
2	304	94	380	661	320	211	927	32	111	163	196
3	121	303	41	753	189	307	555	292	82	536	172
4	167	31	273	291	230	417	667	186	34	90	30
5	91	351	43	111	133	63	1540	373	105	361	120
6	299	172	74	461	144	399	364	137	19	17	135
7	402	121	35	270	266	893	26	454	127	114	208
8	343	373	152	147	171	623	441	635	69	307	91
9	159	656	147	21	130	536	151	162	28	32	298
10	347	59	7	205	218	157	1118	132	68	464	236
Average	234	275	123	313	264	377	588	252	79	219	159

Source: Author's own model based on data collected from TripAdvisor between 11 October and 15 November 2009.

Table 1 displays large differences in the amount of reviews per hotel. These differences can be attributed to the destination and the extent to which guests to a destination use TripAdvisor. New York presents the highest number of reviews per hotel in the Top 10 hotels where the number five in its ranking, Sofitel New York, had received 1540 reviews on 25 October 2009. With such a number of reviews, one can argue that the ranking of such hotel would be nearly impossible to influence with false reviews, unless one would take extreme measures with large amounts of false reviewers that post reviews from different locations.

However, table 1 also displays a hotel with only 7 reviews. The number 10 of Cape Town, as per the ranking of data collected on 15 November 2009, called Kensington Place, would be easy to manipulate, using a fictitious scenario of 10 false reviewers, representing the close family and friends of an hotelier, placing extremely positive or negative reviews. The sample of reviews in this study displays similar deviations. Table 2 presents the amount of reviews and ratings posted for each hotel in this sample.

Table 2 Number of reviews per hotel in the sample of this study

Ranking	Amsterdam	Bangkok	Cape Town	Dubai	Hong Kong	London	New York	Paris	Rio de Janeiro	Rome	Sydney	Average
Highest	105	613	78	207	839	165	95	117	146	103	104	234
Middle	52	28	50	57	169	25	132	91	96	226	47	88
Lowest	40	31	15	16	90	71	145	63	27	201	37	67
Average	66	224	48	93	366	87	124	90	90	177	63	130

Source: Author's own model based on data collected from TripAdvisor between 31 October 2009 and 2 January 2010.

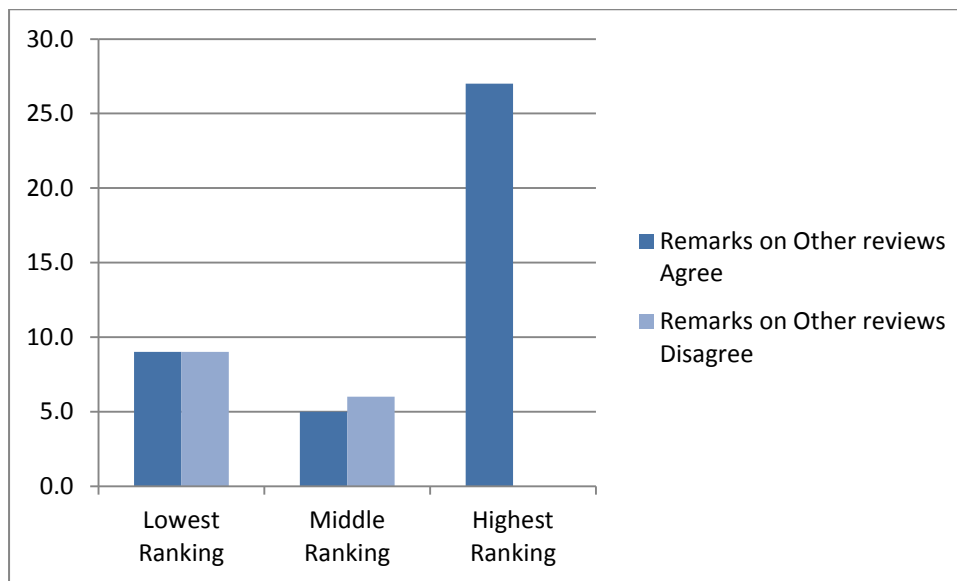
From table 2 it is clear that the average number of reviews in the sample is 130 reviews. Besides large deviations in the number of reviews posted for the different hotels in the different destinations, Table 2 displays a trend where the higher ranking hotels have more reviews than the middle and lower ranking hotels. This trend applies to 7 of the 11 destinations and is also visible in the average scores per ranking over the destinations. It is important to note that as these hotels in the sample were selected based on a minimum amount of 10 reviews and rankings in the English language not dating back further than 1 January 2008, extremes are not represented.

6.1 CONSISTENCY OF REVIEWS AND RATINGS

The 330 reviews from guests on 33 hotels in 11 destinations were analyzed for consistency by identifying the reviews required for saturation, the overlap in comments in reviews of the same hotel, the expressed agreement and disagreement between reviewers, and inconsistencies between the written review and rating of the reviewer.

Figure 2 presents the amount of statements per hotel category of the sample with regards to agreement, or disagreement with other reviews.

Figure 2 Number of comments on agreement or disagreement with other reviews



Source: *Author's own model based on TripAdvisor reviews from sample 2.*

From figure 2 it follows that the reviewers of the highest ranking hotels openly agree most. No comments were found in the reviews of the highest ranking hotels that disagreed with other reviews. This consistency is much lower with middle ranking hotels where the amount of comments on disagreement with other reviews exceeds the amount of comments where reviewers agree with other reviewers. The lowest ranking hotels present an equal amount of nine statements agreeing and disagreeing with other reviews.

Another inconsistency the author analysed was the relation between the written review and the rating that the reviewer gave to the hotel. The author conducted this analysis by reading the review first and then quantifying this opinion in a rating from one to five. A review would then be defined as inconsistent with its rating if the actual rating would differ with more than one point of that of the researchers. There was only one review identified that did not appear consistent with the rating given by its reviewer.

The extent to which reviews are written clearly and are placed in context whereby the reader understands why something may be assessed as good or bad appears an important factor of the credibility and usability of such reviews. Gretzel (2007) touches on this concept when he describes how review writers focus on the length of the review and the detailed descriptions included in review when judging credibility. For the purpose of this study this was defined as ‘the context’ of the review. Without a context, a review may come across as immature and detracts from the perceived reliability of the review and the reviewer.

This context may focus on the background of the reviewer and the trip itself, the use of examples of criteria applied to come to a value judgement of the hotel, or may focus on the traveller in the hotel experience itself. A small number of hotel reviews were found to present no context whatsoever.

In terms of ratings, the standard deviation in reviews is the highest with the middle ranking hotels in the sample (1.04). The lowest ranking hotels have an average standard deviation of 0.82, and the highest ranking hotels present an average standard deviation of only 0.32.

The author further assumed that a deviation of a rating of more than 2 points from the calculated average is an indication that the particular rating is inconsistent with the other ratings given to a hotel in the sample (on a five point scale, two points represent a 40% deviation). Table 3 provides an overview of the hotels that presented ratings with such deviation for the highest, middle and lowest ranking hotels in the sample.

Table 3: Ratings that deviate more than 2 points from the calculated average

Ranking	Amsterdam	Bangkok	Cape Town	Dubai	Hong Kong	London	New York	Paris	Rio de Janeiro	Rome	Sydney	Total	Positive	Negative
Highest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Middle	0	1	3	0	0	1	1	1	1	3	0	11	1	10
Lowest	0	0	0	1	0	1	1	0	1	0	2	6	6	0

Source: *Author's own model.*

From table 3 follows that a total of 17 ratings in the sample deviate with more than two points from the calculated average. Also here, the middle ranking hotels stand out with 11 such ratings of which one rating deviates positively and ten deviate negatively from the calculated

average. All six deviating ratings on the lowest ranking hotels deviate positively from the calculated average.

6.2 Results of investigating possible preferential treatment of hotels by TripAdvisor

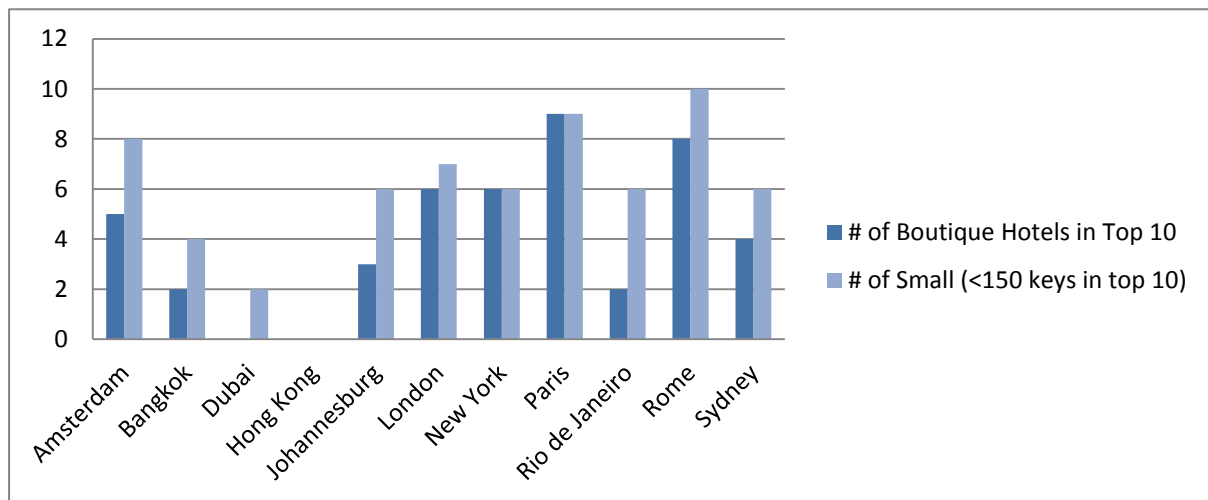
The Top 10 ranked hotels by TripAdvisor was analysed to identify possible trends on preferential treatment by TripAdvisor as one may assume that hotels receiving preferential treatment would want to claim a better position in the rankings. One of the main reasons for TripAdvisor or its parent company Expedia to give a hotel preferential treatment would probably be financial gain, as both companies are profit oriented. As such the criteria a hotel would have to fulfil to be attractive to give preferential treatment to would be that this hotel is:

- a) Part of an international hotel brand that would have the economies of scale to 'sponsor' a ranking; or
- b) A large hotel or hotel group that would generate substantial business through referrals to online travel agents.

From this one can argue that hotel groups, or large hotels would be most likely to receive preferential treatment and end up high in the rankings. Small or boutique hotels would, from this viewpoint, not be attractive to give preferential treatment to. For the purpose of this study, a small and boutique hotels is similar in size and has less than 150 rooms. As there is no uniform definition on what constitutes a boutique hotel, the size criteria combined with a reference by the hotel of the reviewers that it is a boutique hotel, was used to identify a boutique hotel. Also, boutique hotels' unique design is more likely to classify them towards the luxury segment than to the budget segment of hotels. As such, boutique hotel is defined as a small hotel in this study, but a small hotel is not automatically a boutique hotel.

For instance, the number one ranking hotel in Rome in November 2009 is the Welrome Hotel which boasts seven rooms, but should further be defined as an 'economy' hotel as it carries only two stars and with a room rate of \$85 per night is more than three times cheaper than other hotels in the top 10 ranking of Rome. Figure 3 displays the number of boutique and small hotels in the top ten ranking of the eleven destinations researched.

Figure 3 Number of boutique hotels per destination in TripAdvisor top 10 ranked hotels



Source: Own model based on data from TripAdvisor (2009).

From figure 3 it becomes apparent that all European destinations sampled feature a large number of small and boutique hotels in the top 10 ranking. In Amsterdam, the top three hotels are all boutique hotels with respectively four, ten, and nine rooms only. Rome and Hong Kong feature no boutique hotels and only two small hotels can be found in Dubai and none in Hong Kong.

The findings from this study thus present almost the direct opposite as the top 10 ranking on TripAdvisor is in many destinations dominated by small and boutique hotels that do not represent any attraction to give preferential treatment as they would not have the financial means to ‘sponsor’ TripAdvisor and usually would not distribute their rooms via online travel agents as the commission is too high for them and they would not have the amount of rooms to be an attractive client for online travel agents.

During the research, several observations were made with regards to boutique hotels featured on TripAdvisor.

- *Boutique hotels appear to be unique in style and décor.* The Fusion Suites hotel in Amsterdam is a prime example of style and décor and almost each guest review of this property takes note of this.
- *Boutique hotels are individual* in the sense that they do not belong to international or national brands. In addition, they are usually not connected to many of the leading Online Travel Agents but take only direct bookings.
- *Boutique hotels offer highly personalised service.* Guest reviews of the hotels defined as boutique tend to appreciate the personal touch strongly.

It does, however, also present clear evidence that TripAdvisor is not biased in providing its rankings as there is no apparent gain in ranking these small and boutique hotels high.

7 DISCUSSION OF FINDINGS ON THE RELIABILITY OF TRIPADVISOR

To discuss the findings on the reliability of TripAdvisor data, it is compared with the arguments presented in the theoretic review that lead to a questioning of this reliability.

7.1 Anonymous reviews allow hotels to manipulate the ratings system

The first and main argument against the reliability of TripAdvisor is that it allows for the possibility to post false reviews. However, perhaps the main discussion should not evolve around the question whether or not it is possible to post a false review, but whether this has, or may have an impact on the reliability of the ratings on TripAdvisor. Perhaps the strongest countermeasure that TripAdvisor can present is the number of reviews per hotel.

The results indicated that the hotels that rank higher appear much less sensitive to fraudulent reviews as they have high amounts of reviews. It is difficult to stipulate an exact amount of reviews that would make a hotel immune to false reviews, but with a 100 reviews the effect becomes minimal.

The majority of both the lowest and the middle ranking hotels may be affected by false reviews as only two of the lowest ranking and three of the middle ranking hotels feature more than 100 reviews, representing respectively 18% and 27% of the hotels.

Two main scenarios were identified when it would be most likely that a hotelier or a relation of a hotelier would post a false review. Although other scenarios may be identified, their detection within the sample is unlikely which is why they were ignored. For instance, a hotel that has just opened may want to quickly rise to the higher rankings of TripAdvisor and invite many false reviews. Another scenario would be that a hotel wishes to strengthen its ranking and would therefore invite or create false reviews that carry the same message as the ones already posted on the hotel. Such reviews could not be detected within the scope of this research.

The first scenario that can be detected within the scope of this research is that the hotel ranks poorly on TripAdvisor due to bad reviews from reviewers and the hotel seeks to increase this ranking by posting, or have someone else post a false review that is more positive than the existing reviews. A second scenario is that a hotelier would like to bring down the ranking of a competing hotel by posting, or have someone post, a false review that is more negative than the existing reviews.

Three characteristics of reviews that create suspicion from the perspective of these two scenarios, taking into account the initial screening algorithm of TripAdvisor, were identified:

- a) An inconsistent rating that deviates from the calculated average with more than two points and an accompanying review that conflicts strongly with other reviews.
- b) A deviating writing style that makes the review read like a corporate marketing message, or that creates suspicion as the reviewer deems it necessary to stress that the review is an objective review; and
- c) A lack of context on the trip, the reviewer, the reviewers travel experience, or criteria applied to come to a value judgement.

To further identify whether or not a review is false, the context provided in the review is important. A rating and its accompanying review may be inconsistent with other ratings and reviews, but when the context of the accompanying review is clearly outlined, this may explain why the rating is inconsistent. For example, a guest that suffers from a jet lag may rate the experience in the hotel much lower than the majority of guests visiting that hotel. As such, deviations in any of these three areas need to be looked at by means of triangulation. The three areas are combined by first exploring the deviations in ratings with the lack of context presented in a review and then the writing style combined with the deviations in ratings.

In terms of inconsistent rating, 17 reviews were identified in the sample. Seven of these hotels are middle ranking hotels and five are hotels with the lowest ranking on TripAdvisor. The quantification in positive and negative deviations from the average rating is not surprising. All deviations in the lowest ranking hotels are positive and all but one in the middle ranking hotels is negative. From a statistical viewpoint one may have expected some more variation in the deviation of hotels that are ranked in the middle, but if one takes the average rating of a hotel on TripAdvisor of 3.74 into account (Larpen, 2009a), the only possible deviation of more than two points on a five point scale is a negative one for hotels that rank in the middle.

The Breakwater Lodge in Cape Town, South Africa presents three reviews of which the rating deviates with more than 2 points from the calculated average with a score of 1 point for each of them written by 'Ellie06Hampshire', 'Bayliss1', and 'Samats'. However, each of these reviews provides context in terms of criteria mentioned that are consistent with the other reviews on this hotel. 'Littlehippie' rates the Menzies Prince Regent Hotel in London very low with only one point. When studying this review, the reader learns that this reviewer only had lunch and that this was very disappointing. The context for the low rating however

is convincing. The reviewer 'iLoveNudeYork' shares a similar sentiment on the Da Vinci Hotel in New York rating it one out of five only. The rating, however, provides context on the hotel experience and the traveller that explains the low rating. 'Persevaara' disagrees openly with the other reviewers of the New York Inn hotel explaining the high rating of four points. All further inconsistencies in ratings found in the sample may be explained by similar context provided. The review that caused the strongest suspicion of being false due to an inconsistency in its rating is the review from 'fereidooni' on the Ramee Royal hotel in Dubai. This review is inconsistent in that the reviewer rates the hotel with 4 stars where the calculated average rating is only 1.75. Further, it appears that the guest has been visiting another hotel than the other reviewers, in terms of comments. The guest is one of two out of ten reviewers that do not seem to be affected by the noise of the night club and is the only reviewer that feels that the staff in the hotel was friendly. The context provided in this review is limited to the extent that the author classified the review as lacking in context.

In terms of writing style, four reviews were found in the sample of which two read like a marketing message, and in two others the reviewer is stressing that he or she is not biased and that this is an objective review. Although these deviations initially created concern with the author relating to their reliability, these ratings generally do not show a strong deviation from the average of the hotel. Table 4 presents the rating consistency of the ratings of these four reviews.

Table 4 Rating consistency of reviews with deviating writing styles

Hotel Name	Destination	Ranking of Hotel	Reviewer Rating by	Average Rating	Deviation	Deviation	Standard Deviation
Dar Al Masyaf at Madinat Jumeirah	Dubai	High	5	4.7 6	0.2 4	0.4 1	- 0.17
Menzies Prince Regent	London	Middle	2	3.2 4	1.2 4	1.3 3	- 0.09
Whiteleaf Hotel	London	Low	4	1.4 5	2.5 5	0.6 9	1.86
Porto Bay Rio International Hotel	Rio de Janeiro	High	4	4.5 2	0.5 2	0.6 2	- 0.10

Source: Author's own model based on data from TripAdvisor

From table 4 it follows that only one review's rating deviates from the average with a value amount higher than the standard deviation. This means that in terms of the two scenarios identified in which a false review would be established, it is highly unlikely that three of these four reviews could be false. The remaining review on the Whiteleaf hotel in London is accompanied by a rating that is much higher than the average and that deviates from the standard deviation of all ratings on this hotel with 1.84. As such, it is not surprising that this author takes a defensive attitude in his review.

From combining the three characteristics that may indicate a false review, two reviews remain that could be considered as potentially false. The review by 'fereidooni' on the Ramee Royal hotel in Dubai deviates strongly in rating and lacks context. The review of 'Hydonian' on the Whiteleaf hotel in London deviates in rating as well and draws attention through a writing style that may be defined as defensive.

For example, the Whiteleaf hotel in London and the Ramee Royal hotel in Dubai are the lowest ranking hotels in their destination that fulfilled the sample criteria and carry an average rating of 1.45 and 1.75 respectively. As such it is highly unlikely that a visitor of TripAdvisor would be tempted to look at, let alone be influenced by, these potentially false reviews. In perspective of sample, two potentially false reviews identified from a total of 330 reviews represent 0.6% of the reviews analysed.

7.2 TripAdvisor censors reviews and feedback from hoteliers;

The second argument identified in the theoretic review was that TripAdvisor declined to publish a review (Jeff, 2008a) and did not allow hoteliers to provide responses on reviews. Here one can only speculate from own experience in posting reviews. All 14 reviews submitted by the authors over the period of August 2009 to March 2010 were posted on TripAdvisor. The posting of one review appeared delayed as a result of the screening algorithm of TripAdvisor that selected the review for further scrutiny as the hotel was located in the Author's town of residence. Further the amount of hotelier's responses to reviews appears to be substantial, though this has not been quantified.

7.3 Conflict of interest due to ownership by Expedia

The third argument against the reliability of TripAdvisor is its conflict of interest as it is owned by Expedia which makes money by selling hotel rooms online. From this claim would follow that TripAdvisor would favour hotels that deal with Expedia over those that do not in its ranking. No evidence of this was found in the study. The results suggest a model that works

the other way around. Many small boutique hotels and guest houses rank in the top 10 of destinations (see Figure 2) and these hotels do not appear on Expedia or other online travel agents and do not present a clear financial gain for TripAdvisor. As such there is no support for this claim in the data that was analysed.

7.4 Objectivity of consumers in their assessment of quality

The fourth argument outlined in the theoretic review was that consumers are not objective in their assessment of quality (Hewitt, 2008; Weyel, 2008). This argument was investigated by looking at consistency of the reviews and their accompanying ratings. Also the findings on the context of reviews were taken into account as this presents an important indication on why a review and its rating were either positive or negative.

In terms of consistency of the reviews and the accompanying ratings, the data from the sample presents different results based on the ranking of the hotels on TripAdvisor. The reviews on the highest ranking hotels show very little deviation in ratings. Reviews on the middle ranking hotels display the highest deviation in ratings. Nine out of the 110 reviews on these hotels disagree openly with the other reviews, and nine have clear expressions of agreement with the other reviews. The ratings in reviews of the lowest ranking hotels in each destination present a standard deviation that lies in between that of the highest ranking and the middle ranking.

The consistency of reviews, meaning the extent to which the written review is consistent with its accompanying rating was found to be very strong with only one review that was found to be inconsistent out of the total sample of 330 reviews.

The context of the review provides a clear indication of the consumer's interpretation of quality despite differences in the value judgement of that quality. The results indicated that most reviews are rich in context that facilitates the reader to understand how the reviewer came to his or her value judgement of the quality of the hotel experience. Only ten reviews were found to be lacking sufficient context for the reader to understand how the reviewer came to his or her assessment, representing 3% of the total sample of 330 reviews.

From this, one can conclude that there appears to be more agreement in the reviews and ratings on the highest ranking hotels and that this agreement decreases with the lowest ranking hotels and is lowest with the middle ranking hotels. The high deviation in ratings in especially the middle ranking hotels seems to support the argument that consumers are not uniform in their assessment of the quality of the hotel experience. However, the rich context presented in most reviews combined with the continuous growth of TripAdvisor appears to make them useful for other consumers.

8. CONCLUSIONS AND RECOMMENDATIONS

TripAdvisor, with over 30 million reviews, is the market leader, not only in the total number of reviews and members, but also features the highest number of reviews per hotel featured on the website, compared to other review sites and online travel agents. The growth of TripAdvisor appears to be facilitated by a constant innovation in traveller services, which during the time of the research were regularly adapted and extended. TripAdvisor allows guests to post reviews and ratings and uses the ratings of these reviews, combined with other factors to provide companies with a ranking. This ranking represents the quality image of a hotel and results on strong exposure on the website.

The reliability of TripAdvisor was explored through the number of reviews per hotel in 11 destinations, an analysis of the screening algorithm, the consistency of ratings, the consistency, context, and credibility of writing styles and the hotel types of hotels that rank in the top 10 of the 11 destinations. The four theoretical arguments that challenge the reliability of TripAdvisor have been used to structure and triangulate the findings. The following conclusions can be drawn with regard to these four arguments.

The argument that TripAdvisor allows anonymous reviews and that fraudulent reviews may be posted is true to the extent that the data shows that this should be possible given that certain precautions are made to circumvent the screening algorithm of TripAdvisor. The amount of reviews of hotels in the sample appears to be too low for the majority of the middle ranking and lower ranking hotels to claim that their rating cannot be easily influenced. However, a screening of the 330 reviews in sample two against two scenarios in which three characteristics of potentially fraudulent reviews were tested revealed that only two reviews out of the sample give an indication to be potentially false. Given that these reviews that were identified as potentially false were those of the lowest ranking hotels in their destinations, the conclusion is that within the sample tested, fraudulent reviews do not appear to influence the hotel rankings on TripAdvisor. From this follows that when a hotel offers poor quality, it seems almost impossible to change the image of the hotel by posting false reviews as the inconsistency between reviews would be unbelievable and readers would take notice. A hotel that offers exceptional quality cannot be easily tarnished by competitors due to the same reasons.

The data does further not provide any indication that TripAdvisor may censor reviews as all 14 reviews written by the authors over an eight month period were accepted as they were. Also no further substantiation of the argument that hotelier's responses are censored was found, though this was not researched in depth.

Regarding the argument that TripAdvisor may be biased as it is owned by Expedia, the author found the opposite from the induced assumption that TripAdvisor would favour branded hotels and hotel groups to be true as especially the top 10 rankings in European destinations feature a high number of small and boutique properties without any affiliation and commercial value for TripAdvisor.

The argument that consumers are not objective in their assessment was found to be partially true. Especially the reviews and ratings in the middle ranking properties of the sample display apparent differences of opinion in the reviews and the accompanying ratings. This does not hold true for the highest ranking hotels of which the reviews are characterised by a high degree of agreement, overlap, and a low standard deviation in the ratings. However, also when the middle ranking hotels are concerned, the context provided in most reviews provides the reader with a paradigm by which the review was written allowing the reader to place it in context. Further, agreement should not be mistaken for objectivity, especially in an industry that is dominated by service which by its very nature is subjective.

From this, it can be concluded that although it is possible to post false reviews on TripAdvisor and in the majority of the lower ranking and middle ranking hotel alter the hotel's rating and ranking, no evidence was found that this happens on a large scale. Further, no evidence of censorship or a conflict of interest was established, and although reviewers do not always agree, the context in the majority of the reviews allows for readers to identify the quality of a hotel to a very detailed extend. As such, TripAdvisor provides a reliable and rich source of information for guests and with its past and current growth can be argued to become more reliable in the future as an increased number of reviews are likely to limit opportunities to influence ratings by posting fraudulent reviews.

For consumers, TripAdvisor presents a platform that is rich in reliable data that is useful to identify the quality of a hotel as it is experienced by fellow guests.

Hoteliers should not only take this medium seriously, but also make use of the richness of the data available on their hotel. The context provided by reviewers presents opportunities for improvement that conventional marketing research methods do not provide. Craig (2010) sums up this paradigm when he argues: *"Give up the notion that there is a shortcut. Just be the best hotel you can be every single day"*.

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WHAT BIG GIRLS ARE MADE OF: FEMALE PORTRAYALS IN SOUTH AFRICAN TELEVISION COMMERCIALS

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ABSTRACT

Advertising has been criticised for stereotyping women and perpetuating limited role portrayals of females. Popular stereotypes in advertising include domestic roles and sex objects. The present study aimed to determine the frequency of female role portrayals in television commercials on popular South African television channels. The study also examined, *inter alia*, the ethnic representation and the product categories advertised using female models. The research method used in the study was content analysis that focused on the visuals of commercials featuring adult females. The paper reports the frequency of specific role portrayals that were featured in advertising; the ethnic representation as well as the product categories advertised. The results indicate that women are primarily portrayed as product users. In terms of ethnicity, white women are predominantly represented and the product category most often advertised using females is personal care products.

INTRODUCTION

In the early nineteenth century, Mother Goose wrote a nursery rhyme that asserted that little girls are made of “sugar and spice”. Today’s modern woman is often portrayed in advertising as sugar or spice, as she is frequently stereotyped as sweet (a homely mother or housewife) or spicy – a seductive decorative object. As a prominent agent for consumer learning, advertising is often criticised for depicting stereotyped portrayals of women. Such stereotypes include women as mothers or housewives, sex objects or other types of physically decorative objects.

The manner in which people are depicted in advertisements is generally perceived to be a reflection of the reigning societal norms. According to Grau, Roselli and Taylor (2007:63), advertising mirrors prevailing societal viewpoints and it is frequently blamed for the negative stereotyping of females. Furthermore, the images used in advertisements are seen as representing the “ideal”, and therefore impact on the self-images of the audience. Females represent a large consumer group and the majority of products are advertised to attract their attention (Hung, Li & Belk, 2007:1038).

Many research studies on advertising report that women are portrayed mainly in limited stereotypical roles. Koernig and Granitz (2006:830), for example, state that women are depicted primarily at home in the kitchen (or elsewhere) performing cleaning tasks. Women are also often featured as decorative objects. Stereotypes that are presented in popular media are integrated into the personal viewpoints of society, which aggravate the perceptions of inflexible gender roles (Döring & Pöschl, 2006:173). Television in particular is a major information source for not only new brands, but also on acceptable gender-role behaviour.

This paper is based on a research study that was conducted to determine the roles portrayed by women in advertising in South Africa. For the purpose of the paper, the following are described: the identified roles; the ethnic representation in commercials; as well as the product categories advertised using women.

PROBLEM INVESTIGATED

The portrayal of women in advertising has been studied often, but research on this topic has not been conducted recently in South Africa. The portrayal of females in specifically South African advertising has not been studied in recent times; the most current study was conducted in 1991 (Rudansky, 1991). The particular study focused only on female portrayals in magazine advertising. Research on South African television commercials in particular is

lacking. International studies that were reviewed generally compared gender roles in television commercials and did not focus specifically on female portrayals. The study on which this paper is based focused (*inter alia*) on the portrayals of women in television advertising. The latter part of the paper presents the results of the analysis of South African television commercials.

RESEARCH OBJECTIVES

The primary objective of the research was to identify the role portrayals of adult females in South African advertising. Furthermore, the study included *inter alia* the following secondary research objectives:

- To determine the frequency with which women are depicted in multiple roles in one commercial.
- To examine the ethnic representation of women in television commercials in terms of the frequency of representation of African, coloured, Indian and white women.
- To examine the number and type of different product/service categories in commercials featuring women.

LITERATURE REVIEW

Various researchers have analysed the portrayal of women in advertising. Studies that analysed magazine advertisements were conducted by Plakoyiannaki and Zotos (2009); Bolliger (2008); Grau *et al.* (2007); Hung *et al.* (2007); Döring and Pöschl (2006); Koernig and Granitz (2006); as well as Razzouk, Seitz and Vacharante (2003). Previous studies that focused on television commercials were conducted by Nassif and Gunter (2008); Valls-Fernández and Martínez-Vicente (2007); Ibroscheva (2007); Milner (2005:84); Furnham, Pallangyo and Gunter (2001); Furnham and Mak (1999) and Mwangi (1996). The aforementioned television studies analysed gender roles comparatively and did not focus only on female portrayals.

The reviewed studies identified several role portrayals of women, including work-related, homemaker, mother, physically decorative, product user, sex object, social being, mannequin and the romantic role. Role portrayals are identified based on certain aspects of the visuals in a commercial. Rudansky (1991:139) included the following: the model (character), props, setting and the product.

The model's appearance, her attitude and the actions she engages in serve as role indicators. Props (also referred to as supporting elements) are items or objects in the visuals that play part in the commercial, for example the cookware used in demonstrating the

preparation of food. The setting or background assists in determining role portrayals. Different authors used specific settings in determining roles (Ibroscheva, 2007:413; Valls-Fernández & Martínez-Vicente, 2007:693; Mwangi, 1996:210). The setting is mostly classified as home, work or leisure. Home and work or office environments are typically considered indoor, whereas outdoor settings are generally associated with leisure or recreational environments.

The role categories that were universally identified in previous research are the following.

- **Work-related:** The woman in a work-related role is typically dressed in business-like or working clothes and performing work-related activities in a working environment. Work-related portrayals were classified in different ways in previous research. Nassif and Gunter (2008:756) as well as Furnham *et al.* (2001:24) categorised working women as professional, labourer or office workers. Other studies classified occupational portrayals specifically as occupational types and not as specific roles (Valls-Fernández & Martínez-Vicente, 2007:695).
- **Homemaker:** The woman as homemaker is generally depicted at home performing household-related tasks. The setting is domestic (such as a kitchen) and the props support the household-related activity (such as cookware when cooking). This role is associated with a degree of dependency. Women are used consistently in advertising of household-related products. Such depictions were dominant in many previous research studies (Ibroscheva, 2007:415; Milner, 2005:84; Furnham *et al.*, 2001:24).
- **Mother:** As a mother, the model in the commercial interacts with a child or children. She is focused on the child and/or the activity engaged in. Actions that indicate a mother are related to childcare or denote a nurturing attitude. Women as mothers are frequently portrayed in television commercials (Valls-Fernández & Martínez-Vicente, 2007:695).
- **Physically decorative:** in the decorative role, the woman is depicted as the physical ideal. Her appearance is important and is associated with the application of the advertised product. This image is glamorous and appealing, and is often used in demonstrating the effectiveness of personal care items in television commercials (Nassif & Gunter, 2008:757; Valls-Fernández & Martínez-Vicente, 2007:695; Furnham *et al.*, 2001:24). The setting of the commercial is generally unimportant as the physically decorative image is the primary focus of the visuals.
- **Product user:** the product user is classified as someone who is actually using (consuming) or preparing to make use of the advertised product. The setting of the commercial is conducive to product use. Women are frequently portrayed as using the product in television commercials (Furnham *et al.*, 2001:24). Product use can easily be

demonstrated in television commercials as the complex nature of television advertising allows excellent creative scope.

- The sex object: the woman in the sex object role is characterised by sparse or revealing clothing and a provocative attitude. She is not necessarily related to the advertised product and serves as a sexually charged decorative figure in the advertisement. The setting and props in the advertising depiction for the sex object are often irrelevant as she is there purely to attract attention. The sex object was identified as the most prevalent female role in several previous research studies (Ibroscheva, 2007:415; Furnham *et al.*, 2001:24).
- Social being: the woman engaging in contact with other people is classified as a social being. Physical contact can serve as an indicator of social engagement (Ibroscheva, 2007:415). The social being is depicted in a variety of social situations, for example sport events or parties. The model is portrayed with other models and her attention is on the other people or the social activities engaged in.
- Mannequin: the mannequin (also referred to as the model girl) has no distinct relation to other people in the commercial or any pertinent focus on external factors. The mannequin was identified by Rudansky (1991:149), and the mannequin's function is solely to exhibit or show off the product. As such, the mannequin is mostly used in advertising apparel.
- Romantic: the romantic role is depicted by a woman in association with a male and her attitude and expression reflects affection towards the man. The setting suggests romance and excludes other people (Rudansky, 1991:145). The woman as romantic includes *inter alia* depictions of wives or girlfriends; such roles were identified in Hung *et al.* (2007:1039). As it is not always possible to determine if a woman is indeed a wife (married), the term "romantic" rather than wife is used for this type of portrayal.

All the abovementioned roles were included in the present study. Additionally, provision was made for "other" roles as well as a portrayal referred to as "background elements". The "other" category made provision for portrayals that featured specific, definable actions that could be classified as roles not included in the list. Background elements were non-functional portrayals that featured in commercials but had no distinctive purpose and could therefore not be classified as other roles; they literally serve as "space fillers". The analysis of the commercials focused on the visuals of the advertising and the role portrayals were identified using content analysis as research method.

RESEARCH METHOD

Content analysis was used to analyse the visual elements present in a sample of South African television commercials. Content analysis is defined as a research method that makes “replicable and valid inferences from text (and other meaningful matter) to the contexts of their use” (Krippendorff, 2004:18). As such, a content analysis study examines message units (such as commercials) and is a method used frequently in studying advertising. The present research focused on the images in commercials featuring women and the analysis was *inter alia* focused on determining frequencies of portrayals. Descriptive statistics were performed to establish incidence of role portrayals.

To test the reliability of the coding performed by three independent coders, Krippendorff's *alpha* and per cent agreement was used to calculate inter-coder agreement. For the variable with single responses (product category), Krippendorff's *alpha* was calculated. Due to the multiple response nature of the roles and ethnicity variables, agreement between coders was calculated using per cent agreement. Per cent agreement has also been used to determine reliability in previous studies (So, 2004:52).

The reliability scores for the roles variable was 84 per cent; for ethnicity 93 per cent. The product category variable achieved a Krippendorff's *alpha* reliability score of 1 (100%). The reliability scores are deemed satisfactory, as according to Neuendorf (2002:143), reliability scores of 0.80 or higher are considered acceptable.

The study used non-probability purposive sampling to select the most popular television channels from which to select commercials for analysis. Purposive sampling (also referred to as judgement or purposeful sampling) was used to ascertain a appropriate sample of commercials. Patton (in Saunders, Lewis & Thornhill, 2007:232) asserts that in purposeful sampling, it is important to choose “information-rich cases” so that that the sample is suitable for the requirements of the study. The study required commercials featuring adult females in order to obtain the relevant information needed to determine role portrayals.

There are six television broadcasters in South Africa, namely *SABC 1, 2 and 3, e.tv, M-Net* and *DStv*. *SABC 1, 2 and 3, and e.tv* are free-to-air channels, which are accessible to the majority of the national population due to not requiring subscription fees. These channels boast high viewership, which means exposure to television commercials is high. Therefore, the free-to-air channels were considered the most suitable to the requirements of the study. Selecting the most popular channels is consistent with research practices of various other researchers (Nassif & Gunter, 2008:755; Ibroscheva, 2007:412; Valls-Fernández &

Martínez-Vicente, 2007:693). The mentioned channels that were included in the study are the most popular according to the SAARF's (South African Advertising Research Foundation) annual Cumulative TV Channel Reach Data. Table 1 presents the annual television channel reach figures for the free-to-air channels in descending order (SAARF, 2009:1).

Table 1 Annual television channel reach

Channel	Percentage of total audience (February 2008 to January 2009)
SABC 2	98.6%
SABC 1	98.4%
SABC 3	96.8%
e.tv	96.3%

Source: Adapted from South African Advertising Research Foundation (2009).

The sample included all commercials featuring adult women aired in prime time (18:00-22:00) on Mondays, Wednesdays and Fridays of March 2009. Duplicate commercials were noted but excluded from analysis. In order to determine role portrayals, every commercial was examined and the relevant aspects were coded on a coding form. The coding form was used in conjunction with a codebook, which contained detailed descriptors of the role categories. These descriptions were used in analysing each advertisement for the presence of role portrayals. The role descriptions included the character (appearance and activities), the surrounding elements (props), the setting (environment) and the product. These aspects served as indicators of roles. For example, a woman depicted in a kitchen (setting), using cookware (props) to prepare dinner (activity) typifies a homemaker role.

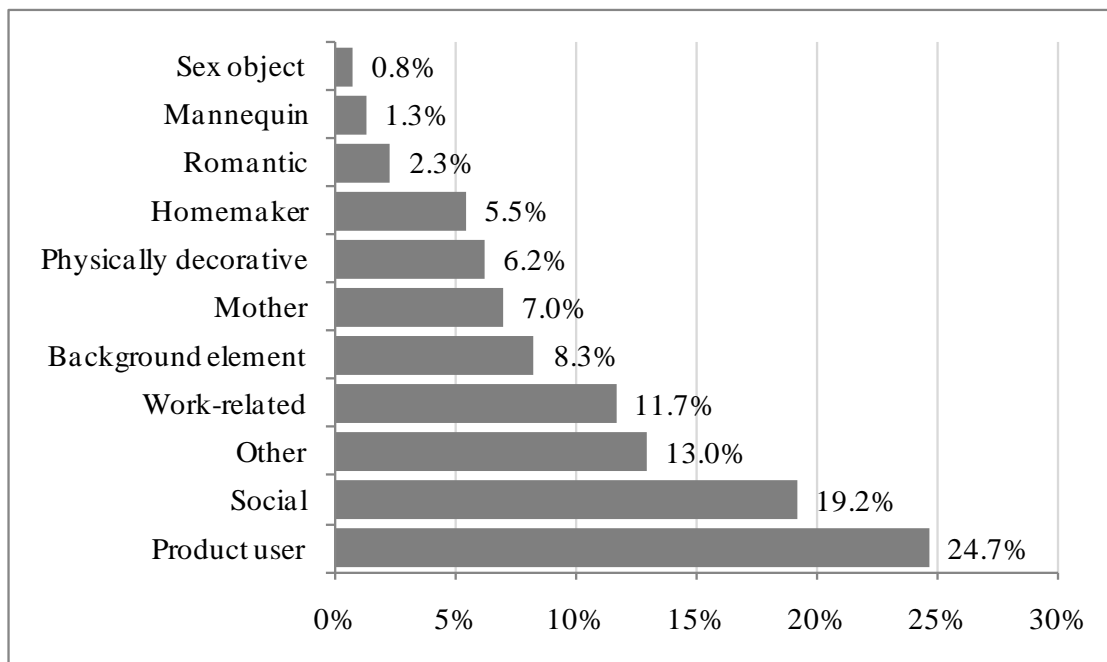
RESEARCH FINDINGS

Commercials featuring women comprised 39.5 per cent of the total commercials. Only commercials that contained at least one adult female were included for analysis. The analysed commercials totalled 342 items. For the purpose of the paper, the roles portrayed (including multiple roles in one commercial), ethnic representation, and the product categories most frequently advertised using women are discussed. Conclusions on the findings are also provided.

Role portrayals

Three hundred and eighty-five role portrayals were identified. Some commercials featured multiple portrayals in one commercial; 43.3 per cent of the television commercials depicted women in more than one role. The research identified nine specific role categories (sex object, mother, housewife, physically decorative, social, career, romantic, product user, and mannequin), as well as “other” and background elements. Figure 1 presents the frequencies of the portrayals identified in the study.

Figure 1 Role portrayals in television advertisements



The results indicated that the woman as a product user was most prevalent in South African television advertising, as it featured in the majority (24.7%) of the analysed commercials. The second most prevalent portrayal was that of the woman in a social role (19.2%), followed by other roles (13%). Roles that were not frequently found were the sex object and mannequin roles (0.8% and 1.3%, respectively).

The product user that was prevalent in the study was also prevalent in studies on commercials in Bulgaria and Zimbabwe. According to Ibroscheva (2007:414) and Furnham *et al.* (2001:24) women were depicted as users of the advertised product in the majority of the studied commercials. It should be noted that in both studies the product user was not classified as a specific role, but rather examined in relation to whether women were depicted as experts or authorities in terms of product use. Ibroscheva (2007:416) also reported that women engaged in physical contact in almost half of the television commercials investigated,

indicating social interaction. The social role was second most popular in the present study, indicating that South African advertisers afford high importance to female consumers' social lives.

The woman in a work-related role was not found frequently in the study (11.7%). When it is considered that half of the workforce in South Africa consist of women (Cant, Brink & Brijball, 2006:97), the question arises why women are not portrayed in work-related roles more frequently. It appears that advertisers in South Africa prefer focusing on a woman's social image rather than her professional image.

The role with the lowest frequency in the study was the sex object. These results are in contrast with the findings of Ibroscheva (2007:415), who reported that women were more likely to be dressed in revealing clothes rather than demure apparel. The present results reflect a movement away from sexual objectification of women in advertising. The South African society places a strong emphasis on the rights of women and protecting women against abuse, and this may influence the manner in which women are portrayed in commercials.

The traditional stereotypes of homemaker and mother were also not prevalent in the study. These results are not consistent with previous research that indicated strong stereotyping of women, particularly in terms of traditional roles. According to Mwangi (1996:212) women were prevalently depicted in the domestic roles in television commercials. Similarly, women were most likely to be depicted in household settings (Nassif & Gunter, 2008:757). The woman as mother was frequently portrayed in a study on gender roles conducted by Fernández and Martínez-Vicente (2007:695).

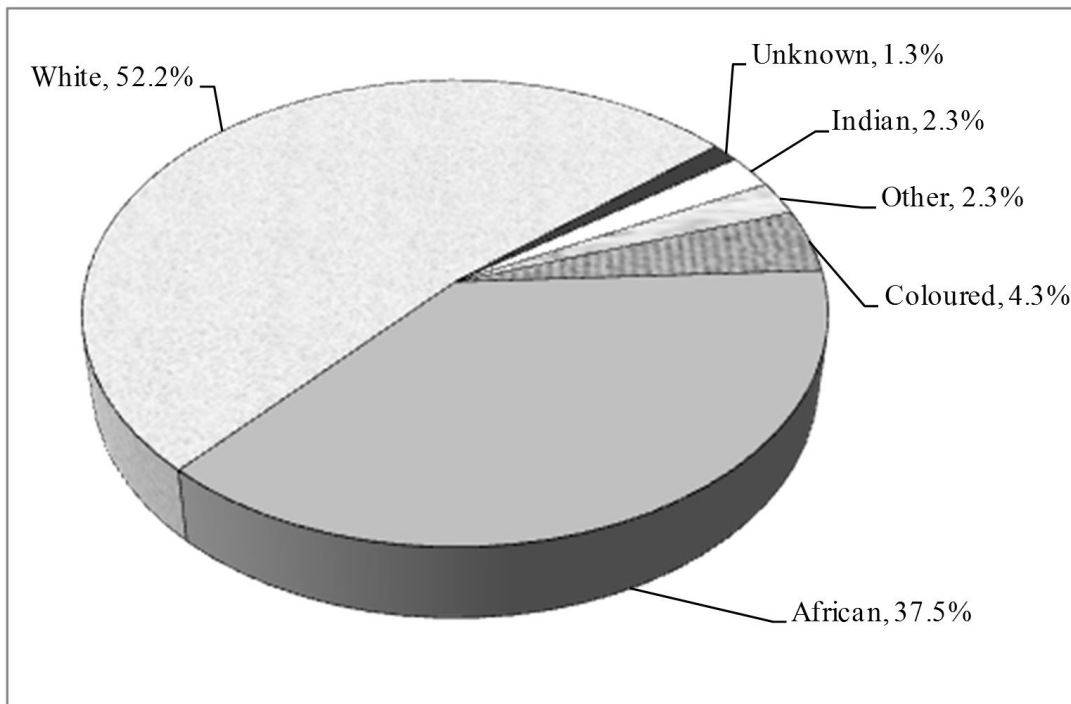
When previous research results are considered, it seems that women are not stereotyped in South African television advertising. Traditional stereotypes were not widespread in the present study, as women were not portrayed frequently as domesticated or overly sexualised characters. Additionally, women were also portrayed in multiple roles in one commercial, indicating that advertisers pay heed to the multi-faceted lifestyle of the modern South African woman.

Ethnicity

The ethnicity of the women depicted in commercials was also recorded. The categories included the four primary South African ethnic groups, namely Africans, coloureds, Indians and whites, as classified by Statistics South Africa (2009:4). Provision was also made for

other ethnic groups (for example Latino) and unknown portrayals. The “unknown” category was included as the visuals in television commercials are often presented in quick succession or contain small images of which ethnicity is difficult to determine. The results of the ethnic findings are portrayed in Figure 2.

Figure 2: Ethnic representation in television commercials



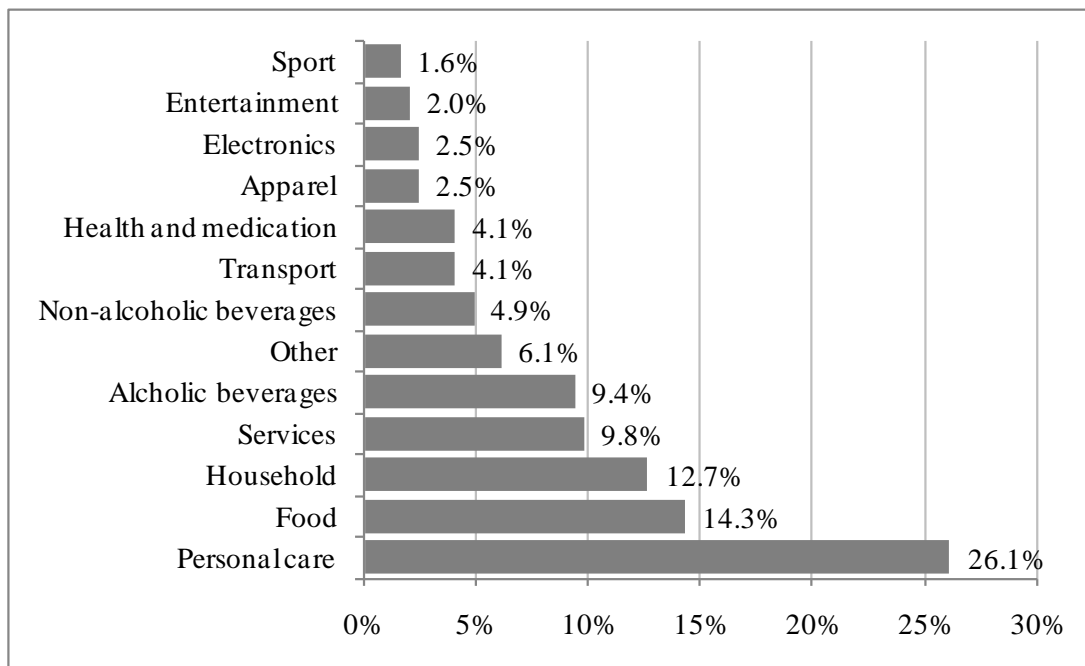
The majority of depictions featured white women (52.2%), followed by African women (37.5%). Women representing coloured and Indian ethnic groups were not frequently represented.

The findings on ethnicity in the present study are in contrast with the national population structure, as Africans represent the majority (75.4%) of South African adults, and 13.3 per cent are white people (Koenderman, 2009:13). If access to media is considered, however, the population group with the highest access to television is the white ethnic group (96.4% have access to television). Comparatively, Africans’ access to television is far lower at 79.7 per cent (Koenderman, 2009:15). The higher frequencies of white women in commercials suggest that advertisers consider ethnic access to media and reflect these groups in advertising on television. The incidence of African women in commercials is however quite low when observed in terms of access to television.

Product categories

The study included twelve specified product or service categories, namely apparel, alcoholic beverages, non-alcoholic beverages, transport, electronics, entertainment, food, health and medication, household, personal care, services and sport. Provision was also made for other product categories not listed. The findings for product categories are depicted in Figure 3.

Figure 3 Product/service categories



As can be seen from the above figure, personal care products were the most often advertised using women (26.1%). Food (14.3%) and household products (12.7%) were second and third most frequent. Women were the least often featured in advertising for sport-related products (1.6%).

The product categories most often advertised featuring women in the present study was personal care, food and household products. The high frequency of personal care product advertising is not unexpected when considering that the target audience for such products primarily consist of women. In particular, this product category includes commercials for cosmetics which target an almost exclusively female market. Similar findings were found in previous research, as women were most often featured in physical care or beauty product commercials (Valls-Fernández & Martínez-Vicente, 2007:694). The same study indicated food products as the second most popular category in advertising using women. Other studies found clear links between female models and advertising of household products (Nassif & Gunter, 2008:759; Mwangi, 1996:213).

The results of the present study indicate that South African companies consistently use women in advertising of specific product categories. The prevalent categories of food and household products are also consistent with product categories that are generally considered the domain of the woman in the household. The low frequency of women in sport-related product advertising is not surprising as sport is generally considered a male-oriented area (Grau *et al.*, 2007:55). South African companies appear to link females with traditional female product categories.

In conclusion, the findings of the research suggest that Mother Goose's rhyme rings true in modern South Africa, as big girls are portrayed as "all things nice" – a variety of roles and ethnic depictions. The woman is also depicted in multiple roles in one commercial, reflecting her multi-faceted life. The "sweet" nature of the woman is revealed in that she is featured primarily in traditionally female product categories; albeit not in traditional roles.

MANAGERIAL IMPLICATIONS

Women in work-related roles were featured relatively seldom despite employment trends that indicate women comprise half of the South African workforce (Van Klaveren, Tijdens, Hughie-Williams & Martin, 2009:5). It is suggested that advertisers should consider featuring women in career roles more often in commercials. This will enable a broader scope of targeting as women may respond better to advertising that depicts scenarios and portrayals that they can relate to. Portraying women's current circumstances (including work) enables the consumer to relate more easily to the advertised brand, which enhances the consumer's identification with the brand and consequently the product's brand equity. Additionally, the career aspect is a significant part of many women's lives and advertising visuals should portray this.

In terms of ethnicity, the results of the study indicated that African women are represented comparatively infrequently in commercials when considering their access to television (and therefore exposure to advertising). It appears South African advertisers may be neglecting a major market segment in terms of ethnic advertising depictions on television. Women representing a specific ethnic group will relate better to similar ethnic depictions in commercials. Featuring models in advertising that are dissimilar in ethnicity to the target audience means that the effect of the advertising portrayals on the target audience may be diminished. For example, an Indian woman will probably relate better with a depiction of an Indian woman in a commercial, and consequently respond more positively towards the advertised brand. South African advertisers ought to consider the ethnic profile of their target

audience in order to facilitate an effective match between the product benefits and the market's unique needs.

Women were portrayed predominantly in the product category of personal care, indicating that South African women place high value on physical attractiveness. Additionally, women were more associated with traditional "female" products such as food and household items. Modern women are becoming more involved in purchasing of products that are not traditionally associated with women, such as cars and electronics. Advertisers of such products should consider featuring women in their advertising in order to reach a larger market. Additionally, women influence purchases of such items for the household and should be included in the advertising thereof.

Future research should be conducted to determine the perceptions of women on the manner in which females are portrayed in commercials. Qualitative research (such as depth interviews or focus groups) should be conducted to determine how women are motivated and affected by advertising portrayals. Research on female portrayals in other media (such as outdoor and Internet) is also recommended. A comparative study ought to be conducted on commercials from different countries, which will extend the context of the research, and will also allow comparisons of advertising across different cultures. Comparisons between women and men in terms of role stereotyping as well as product categories associated with the genders may also provide valuable insight. The role portrayals of men in South African advertising may also add value to the field of role portrayals in advertising.

CONCLUSION

The paper outlined selected findings of a content analysis conducted on South African television commercials. The paper focused on the role portrayals of women, the ethnic representation and the product categories advertised featuring women. The discussion emphasised that the match between a character featured in a commercial and the image of the advertised brand is important. The female consumer targeted in advertising will identify more easily with a portrayal that reflects her own circumstances or that depicts a situation that she finds attractive.

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ABSTRACT

Delivering a quality service to customers is important for any institution. Service quality has become an important issue to South African Higher Education Institutions, and this has aroused considerable interest in how students perceive service quality as delivered by their tertiary institutions. A Higher Education Institution (HEI) therefore needs to know what

students' expectations and perceived performance is regarding various service dimensions. The purpose of this paper is to present findings of student satisfaction with service delivery by student services administration at Universities of Technology in Gauteng and Cape Town. Empirical research was done to compare the expectations and perceived performance of students regarding service delivery by student services administration. The main findings are that both institutions have areas to improve namely on equipment, physical appearance of facilities appearance of technology, service staffs' appearance and communication with students.

INTRODUCTION

Education is an important industry in national development. There exist a relation between education and economic growth. Brunat (2006) argued that an educated population is a springboard for high economic performance. According to Berry (1995) quality service delivery in higher education is one of the important factors enhancing value, and can positively influence a HEI's success. HEI's provide the services delivery to satisfy their students' needs. The students referred to are respectively registered first, second, third and fourth year students at both the University of Technology in Gauteng and the University of Technology in Western Cape.

Nowadays, service quality has emerged as a key strategic issue in HEI management in South Africa (Nejati & Nejati, 2009). According to Berry (1995) service is one of the important factors enhancing value, and can positively influence a HEI success. The student expectation is an essential component to improve a HEI service delivery method. Managing services is of paramount importance for higher education organisations who want to establish themselves as quality service providers in a competitive higher education market. Various authors have come to realise the importance of service quality in higher education institutions (Edvardson, 2005; Brassington and Pettitt, 1997; Shun-Hsing, Ching-Chow, Wen-Tsann, Tsu-Ming 2007; Wetzels, de Ruyter and van Birgelen 1998; Rust, Danaher and Varki, 2000).

Customer perception is the link to market share and financial performance. An important aspect relating to service delivery is having an understanding of aspects pertaining to services and service delivery, tangibility, reliability, responsiveness, assurance and empathy. Service delivery activities are undertaken by an higher education institution to meet the needs of its students (Rudelius, 2004). Since 1997 quality assurance in higher education has been the main function of the Higher Education Quality Committee (HEQC) of the Council on Higher Education (CHE). In addition to the above mentioned act it is imperative that higher

education in South Africa ensure internal and external quality assurance mechanisms are in place.

LITERATURE REVIEW

Literature from several authors (Edvardson, 2005; Brassington and Pettitt, 1997; Shun-Hsing, Ching-Chow, Wen-Tsann, Tsu-Ming 2007; Wetzels, de Ruyter and van Birgelen 1998; Rust, Danaher and Varki, 2000) from various fields have stressed the importance of service quality, and even more so for higher education institutions. According to Berry (1995) and Nejati and Nejati (2009) HEI's are increasingly recognising higher education as a service industry and placing greater emphasis on meeting the expectations and needs of their students. The importance of satisfying customers is important to profit-making institutions, as satisfying students is to higher education institutions as non-profit organisations. Satisfying registered students' needs and expectations is also important for student retention. Service quality and customer satisfaction are inarguably the two core concepts that are the crux of the marketing theory and practice (DeShields, Kara and Kaynak, 2005). Market studies in the customer satisfaction and customer service quality field have shown that higher customer satisfaction leads to better financial returns (Rust, Danaher and Varki, 2000).

Rendering of services to students is a process that requires an activity or activities that allows a student to benefit from the service being offered by a HEI in fulfilment of the students' needs and wants (McDougall and Levesque, 2000). There has been considerable debate on whether student satisfaction is an attitude or a relatively momentary consumption-specific construct, or an outcome or an evaluation. Further debate is the consideration whether service quality is a cause of satisfaction or a consequence of satisfaction. It is also not clear whether future intentions and student satisfaction are driven by the same set of factors. This stems from the basic notion that customer satisfaction is a necessary but not a sufficient condition for future purchase intentions (McDougall and Levesque, 2000).

The delivery of services depends on the staff (people) that deliver the service and service quality is determined by the specific staff member (person) delivering the services on a day-to-day bases. This implies that the developing of pricing, promoting, and service delivery is a challenging process due to the quality of the service being inconsistent (Kerin, Hartley and Rudelius, 2004). The quality of the service depends on who provides the service, when the service is provided, where the service is provided and to whom it is provided. It is highly variable to each student (Kotler & Keller, 2009).

Students do not assess service quality on outcome only, but consider also the process of service delivery as well as the context in which service delivery takes place (Athanasopoulos, Gounaris & Stathakopoulos, 2001). Gi-Du and James (2004:266) supported by Alexandris, Dimitriadis and Markata (2002:225) view service quality as multidimensional, consisting of five dimensions; reliability, assurance, tangible, empathy and responsiveness. Service quality is an attitude which is formed by a long-term inclusive evaluation of performance (Hoffman et al., 2003). Service quality is defined by the student and not the staff member, and students' assess service quality by comparing their expectations to their perceptions of how the service is performed. Service quality is made up of three significant dimensions, namely service processes, interpersonal process and physical evidence (Etzel, Walker, and Stanton, 2004).

Service quality can be grouped into *two* categories. *Firstly* there is technical quality which relates to the quality of the result or outcome of the service. Technical quality is what the student is actually gaining from the service, e.g. an actual haircut from a hairdresser, legal advice from a solicitor. *Secondly* there is the functional quality which relates to the manner and atmosphere or process in which the service is delivered, in a friendly and efficient manner (Wetzels *et al.*, 1998; Hill, 1995; and McColl-Kennedy, 2003). Service quality is measured by various service dimensions. (Lamb, Hair and McDaniel 2004a; Seth, Deshmukh and Vrat, 2006). The main purpose of this paper is tangibility and there for only tangibility will be discussed. Intangibility is the dominant characteristic of services because it is often not possible to feel, see, taste or smell a service, services are an experience or a performance and not a physical object (Clemes, Mollenkopf and Burn, 2000). Services cannot be touched, seen tasted, heard or felt. They can therefore not be stored or duplicated (Lamb, Hair & McDaniel, 2004a). This poses a challenge for those delivering services as there is nothing physical to focus on. Focus then is moved towards the benefit the student will achieve when making use of the service.

PURPOSE AND OBJECTIVES OF THE RESEARCH

The purpose of this paper is to determine students' level of satisfaction regarding service delivery with student services administration. To achieve the purpose of this paper, the primary objective of this study is to determine the students' overall satisfaction with student services administration at two universities of technology, one in Gauteng and the other in the Western Cape.

Secondary objectives are:

- To determine students expectations with the tangibility dimension of service delivery by student services administration at two universities of technology, one in Gauteng and the other in the Western Cape.
- To determine students perceived performance with the tangibility dimension of service delivery by student services administration at two universities of technology, one in Gauteng and the other in the Western Cape.

HYPOTHESES

Normally the Hypotheses are stated based on the objectives

In this paper only one hypothesis was tested.

Ho₁ – There is no significant difference between students at two universities of technology, one in Gauteng and the other in the Western Cape, regarding the tangibility dimension of service delivery by student services administration.

Ha – There a significant difference between students at two universities of technology, one in Gauteng and the other in the Western Cape, regarding the tangibility dimension of service delivery by student services administration

RESEARCH METHODOLOGY

For the purpose of this study a combination of exploratory research and conclusive (descriptive) research was conducted. The data analysis reflects the **levels of importance**, **perceived performance** and consequently level of **satisfaction** of one dimension of service quality by student administration namely, **tangibility**.

The sample framework, measuring instrument and data collection and analysis

The target population of interest in this study is registered students at two universities of technology one in Gauteng and the other one in the Western Cape. Cluster sampling was applied to select the respondents. First the two universities were selected by means of convenience sampling. There after multi-stage cluster sampling was used to select the faculties, departments and students. Students were selected based on which campus they were attending classes. The target population is finite, because only registered students from the Faculty of Management Sciences, Faculty of Health Sciences Faculty of Humanities and Faculty of The Arts, Faculty of Business and Faculty of Informatics and Design of the two universities of technology was selected to complete the questionnaires.

A service satisfaction survey was conducted amongst registered, first, second, third and fourth year students at the above mentioned two universities of technology. Students' satisfaction was measured regarding pre-identified service quality dimensions relating to student administration services. A total of 935 questionnaires were distributed at the two universities of technology and 770 questionnaires (82.4%) were received back. Thirty five (4.5%) of the 770 questionnaires were rejected due to incompleteness. A total of 735 questionnaires of the 770 questionnaires could be used after editing, giving a 78.6% response rate. A total of 735 students (364 from Gauteng and 371 from Western Cape) completed the pre-coded self administered questionnaire with a combination of multiple and scale questions as well as SERVQUAL questions where each statement was expressed as an opinion and students were asked to indicate their *expectations* on a five-point scale in which 1 = Very high expectations and 5 = Very low expectations. *Perceived performance* was rated on a five-point scale where 1 = Excellent and 5 = very bad. A total of 22 items were used to measure the various service dimensions as provided by student services department.

An item analysis was carried out to test validity and the reliability of the questionnaire. (Malhorta, 2004; Zikmund, 2003; and Churchill, 2001). A Cronbach Alpha's coefficient of all the service dimensions was done as reflected in **Table 1**, and that confirm a high degree of reliability and internal consistency of the questionnaire used for the purpose of this paper.

(INSERT TABLE 1 HERE)

Data was captured on an Excel spreadsheet and analysed by using the SPSS version 16.0 statistical package. Data was analysed after the list of 22 pre-identified service related variables were sorted into 5 service dimensions. **Only the tangible service dimension was analysed for the purpose of this paper.** A skewness and kurtosis analysis was done because it is used in mean and covariance structure analysis. Seeing that an even distribution exist in this study a parametric statistical test was selected to analyse the data. To measure the SERVQUAL service dimensions an independent **t-test** was applied to assess the mean (μ) differences between **expectations and perceived performance** of the tangibility dimension at the two higher education institutions.

Findings

The students indicated fairly high expectations on all the service dimensions. For the purpose of this paper the tangible service dimension on expectations and perceived performance will be represented.

The intangibility characteristic of a service is the inability to feel, see, taste, or smells a service while tangibility refers to the appearance of the institution's physical facilities, equipment, personnel, and communication materials. The statements in **Table 2** as established by SERVQUAL, were made relating to the expectations in **Figure 1** and perceived performance in **Figure 2** of the tangible nature of service delivery by the student services departments at two universities of technology, one in Gauteng and the other in the Western Cape.

Statement 1 – *“The appearance of modern looking equipment to simplify service delivery”*.

Figure 1 indicate that in terms of **expectations** for **statement 1**, the Gauteng sample $\mu = 2.30$ and for the Western Cape sample $\mu = 2.33$. **Figure 2** indicate that in terms of **perceived performance** for **statement 1**, the Gauteng sample $\mu = 2.82$ and for Western Cape sample $\mu = 2.79$. From the analysis of **statement 1**, it is clear that the sample (students) at both institutions has **high expectations**, and they **perceive** the **performance** as **good**. The sample from Western Cape perceives the performance slightly better than the sample from Gauteng.

Statement 2 – *“Visually appealing physical facilities”*

Figure 1 indicate that in terms of **expectations** for **statement 2**, the Gauteng sample $\mu = 2.30$ and the Western Cape sample $\mu = 2.33$. **Figure 2** indicate that in terms of **perceived performance** for **statement 2**, the Gauteng sample $\mu = 2.82$ and the Western Cape sample $\mu = 2.79$. From the analysis of **statement 2** it is clear that the sample at both institutions has **high expectations**, while **perceived performance** was **good**. The sample from Western Cape perceives the performance slightly better than the sample from Gauteng.

Statement 3 – *“Appearance of technology to simplify service delivery”*.

Figure 1 indicate that in terms of **expectations** for **statement 3**, the Gauteng sample $\mu = 2.3$ and the Western Cape sample $\mu = 2.2$. **Figure 2** indicate that in terms of **perceived performance** for **statement 3**, the Gauteng sample $\mu = 2.81$ and the Western Cape sample $\mu = 2.73$. From the analysis of **statement 3**, it is clear that the sample at both institutions has **high expectations**, while perceived performance is **good**. The sample from Western Cape

has slightly higher expectations and perceives the performance slightly better than the sample from Gauteng.

(INSERT TABLE 2 HERE) landscape

Statement 4 – “*Tidy appearing employees*”.

Figure 1 indicate that in terms of **expectations** for **statement 4**, the Gauteng sample $\mu = 2.04$ and the Western Cape sample $\mu = 2.0$. **Figure 2** indicate that in terms of **perceived performance** for **statement 4**, the Gauteng sample $\mu = 2.36$ and the Western Cape sample $\mu = 2.35$. From the analysis of **statement 4**, it is clear that the sample at both institutions has **high** expectations, while perceived performance is **good**. The sample from Western Cape has very slightly higher expectations and perceives the performance very slightly better than the sample from Gauteng.

Statement 5 – “*Appearance of communication materials*”.

Figure 1 indicate that in terms of **expectations** for **statement 5**, the Gauteng sample $\mu = 2.18$ and the Western Cape sample $\mu = 2.02$. **Figure 2** indicate that in terms of **perceived performance** for **statement 5**, the Gauteng sample $\mu = 2.73$ and the Western Cape sample $\mu = 2.61$. From the analysis of **statement 4**, it is clear that the sample at both institutions has **high** expectations, while perceived performance is **good**. The sample from Western Cape has slightly **higher** expectations and perceives the performance slightly **better** than the sample from Gauteng.

Table 2 indicates that the biggest difference (ranked as 1) between expectations and perceived performance be present in the tangibility dimension with **statement 5** “*Visual appeal of advertising material*” at both institutions of technology. The Gauteng sample had a gap score of -0.55 and the Western Cape sample had a score value of -0.59 resulting in the biggest extent of dissatisfaction with **statement 5** “*Visual appeal of advertising material*” for the samples at both universities of technology. Although the students at both universities are dissatisfied, the students at Western Cape are slightly more dissatisfied than students at the university in Gauteng.

(INSERT FIGURE 1 HERE)

(INSERT FIGURE 2 HERE)

The smallest difference (ranked as 5) between **expectations** and **perceived performance**, present in the tangible dimension, is with **statement 4** “*Neat appearance of employees*”. Gauteng sample has a gap score of (-0.31) and Western Cape sample has a gap score of (-0.26). This resulted in the less extent of dissatisfaction of the sample (Kasper, van Helsdingen & de Vries, 1999:210). Less negative gap scores imply higher levels of perceived service quality, and therefore perceptions come closer to match expectations. From this it can be concluded that the expectations of both samples was met with regard to “*Neat appearance of employees*”.

The results of the investigation have important implications for the future planning and development in South African higher education industry. Service departments should take cognisance of the significant service quality issues highlighted in this study. Higher education institutions should have programs in place to enable them to identify those areas of tangibility that need to be improved to comply with the expectations of students regarding quality service delivery.

CONCLUSIONS

Statement 1 – “*The appearance of modern looking equipment to simplify service delivery*”.

Respondents at both institutions had *high* expectations and experience the appearance of modern looking service equipment as good. Both the respondent groups from the universities of technology one in Gauteng and the other in the Western Cape perceive the appearance of modern looking equipment as good. The sample from the Western Cape perceives the appearance of modern looking equipment slightly better than the sample from Gauteng. This implies that both institutions have areas to improve on equipment to ultimately provide an *excellent* service experience.

Statement 2 - “*Visually appealing physical facilities*”

Respondents at both institutions had *high* expectations and a good service experience regarding the physical appearance of facilities. Although both respondent groups were satisfied with the physical appearance of facilities, the sample of Western Cape perceives the physical appearance of facilities slightly better than the sample from Gauteng. This could be due to the respondents not having adequate knowledge or experience to evaluate facilities. This implies that there is room to improve the physical appearance of facilities at both the institutions to provide for an *excellent* service experience.

Statement 3 – “*Appearance of technology to simplify service delivery*”.

Respondents at both institutions had *high* expectations and a good service experience regarding the appearance of technology. Both respondent groups were satisfied and had *high* expectations with the appearance of technology. There is room for improving the appearance of technology to provide an *excellent* service.

Statement 4 – “*Tidy appearing employees*”.

Respondents at both institutions had *high* expectations and a good service experience regarding the tidy appearance of employees. Both respondent groups were satisfied and had a good service experience with the tidy appearance of service staff. The sample from the Western Cape has slightly *higher* expectations and perceived performance than the Gauteng sample. Pls check – refer to Fig 1 and 2. There is room for improving on service staffs’ appearance allowing for an excellent service experience.

Statement 5 – “*Appearance of communication materials*”

Respondents at both institutions had *high* expectations and a good service experience regarding the appearance of communication material. Both respondent groups were satisfied with the appearance of communication material. The sample from Gauteng perceived performance regarding appearance of communication material slightly higher than the sample from the Western Cape. This therefore implies room for improving communication material allowing for an *excellent* service experience.

MANAGERIAL IMPLICATIONS/RECOMMENDATIONS

Statement 1 – “*The appearance of modern looking equipment to simplify service delivery*”.

It is recommended that both universities of technology in Gauteng and the Western Cape invest in the latest technology needed to provide excellent services to its students, especially during the peak times encountered at the administration buildings.

Statement 2 - “*Visually appealing physical facilities*”

It is recommended that both institutions frequently review and improve the physical appearance of the various administration facilities and when financially permitting make the necessary furnishing changes to be inline with modern looking society.

Statement 3 – “*Appearance of technology to simplify service delivery*”.

It is recommended that both institutions must frequently control that the latest technology is applied to ensure an *excellent* service experience for its students.

Statement 4 – “Tidy appearing employees”.

It is recommended that service staff be provided with fashionable corporate ware to ensure a uniform appearance amongst the designated service staff.

Statement 5 – “Appearance of communication materials”

It is recommended that the universities of technology in Gauteng and Western Cape should ensure adequate communication material in the form of visible notice boards and electronic boards in and around the administration a building which on a continuous basis informs students on day-to-day activities needed to be done. The closing dates of registration should be communicated daily to students ensuring they are informed at all times of the dates.

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Table 1. Cronbach Alpha Coefficient analysis for service dimensions

Dimension	Expectations	Perceived Performance
Tangibility	.794	.764
Reliability	.841	.802
Responsiveness	.845	.763
Assurance	.817	.732
Empathy	.858	.835

Table 2 –Gap analysis of Dimension 1: Tangibility

Statement	Expectations Mean (μ) for Gauteng	Perceived Performance mean (μ) for Gauteng	GAP SCORE	P-VALUE	Ranking for Gauteng	Expectations Mean (μ) for Western Cape	Perceived Performance mean (μ) for Western Cape	GAP SCORE	P-VALUE	Ranking for Western Cape
1. Appearance of modern equipment to simplify service delivery	2.33	2.82	-0.49	0.00	4	2.30	2.71	-0.41	0.00	4
2. Visually appealing facilities	2.30	2.82	-0.52	0.00	2	2.33	2.79	-0.46	0.00	3
3. Appearance of technology	2.30	2.81	-0.51	0.00	3	2.20	2.73	-0.53	0.00	2
4. Neat appearance of employees	2.04	2.35	-0.31	0.00	5	2.00	2.25	-0.26	0.00	5

5. Visual appeal of advertising material	2.18	2.73	-0.55	0.00	1	2.02	2.61	-0.59	0.00	1
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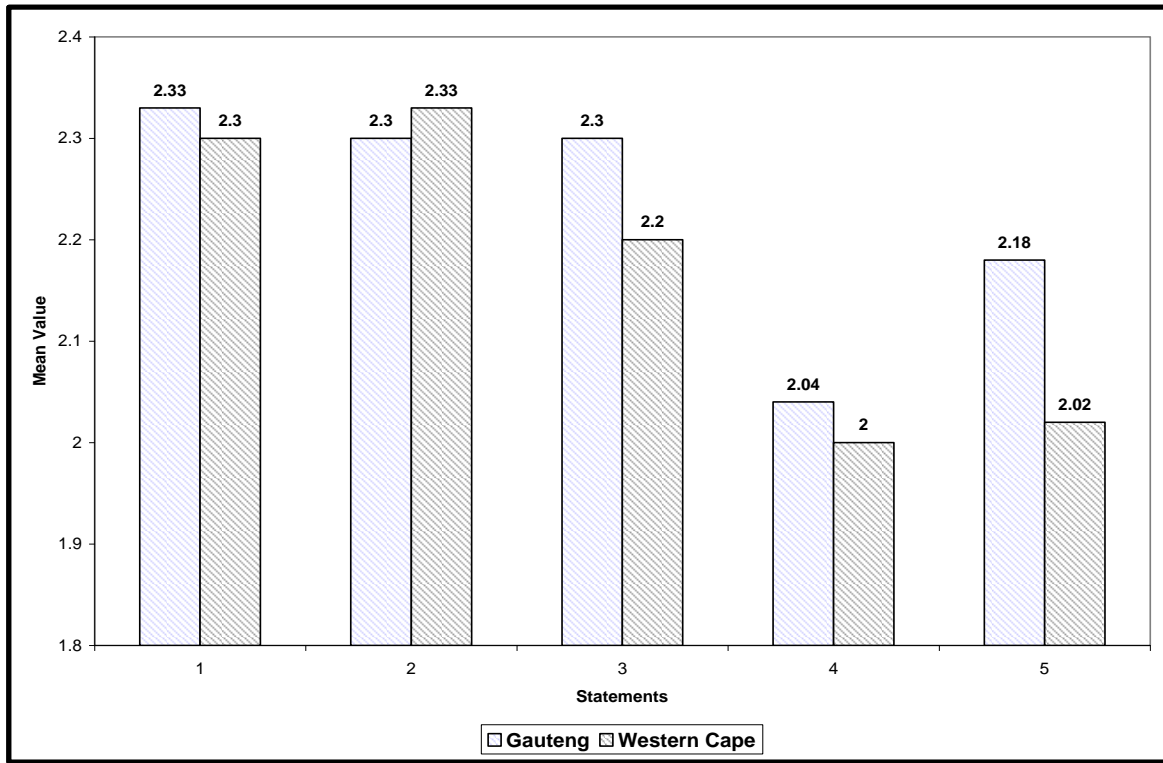


Figure 1– Tangible Dimension for Expectations

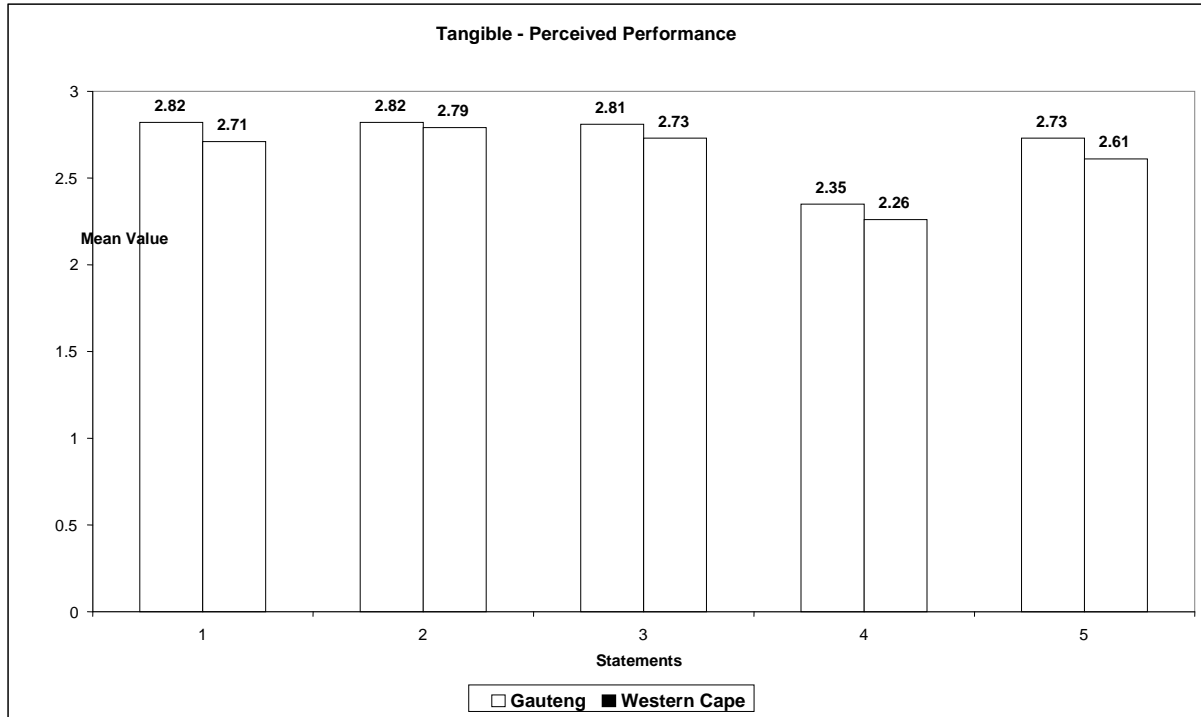


Figure 2 – Tangible Dimension Perceived Performance

INTERNET USAGE AMONGST SOUTH AFRICAN WOMEN

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ABSTRACT

The paper presents the findings of an inquiry to determine the gratification motives of South African women for using the internet. Using the uses and gratifications theory, the inquiry used an internet-based survey instrument amongst South African women's magazine subscribers. This inquiry found that the most significant gratification motive sought from the internet by the respondents was interpersonal utility or social gratification. This finding suggests that in addition to its other uses, the internet is an important medium for socialization amongst South African women. The managerial implications of the findings are discussed.

Key words: Internet, women, uses and gratifications theory, media

INTRODUCTION

Despite its unabated growth since its advent, the internet has only recently gained significant attention as an area for mass media research. According to McQuail (2005: 138) communication researchers have "overlooked not only the internet but the entire field of computer-mediated communication." However, the internet; described as "the world's largest computer network" (Mitri and Kirkwood Jr., 2006: 402) hosts a number of information sources

and applications such as electronic mail, intranets and the inter-linked hypertext documents (Mitri and Kirkwood Jr., 2006) that makes it difficult and perilous to ignore it as a medium of research. In South Africa alone, 4.5 million people have internet access (Goldstuck, 2009). This constitutes roughly 10 percent of the South African population and the number is set to double over the next five years (Goldstuck, 2009).

The internet has a number of unique characteristics that sets it apart from traditional media. It is interactive (Rafaeli and Sudweeks, 1997) and it has a global reach (Berthon, Pitt and Watson, 1996). To establish a presence on the internet is relatively cheap and easy (Berthon, Pitt and Watson, 1996). Further, the internet allows for more sophisticated audience segmentation (Ko, Cho, and Roberts, 2005:57). Consequently, it is affecting other more traditional media. For example, O'Toole (2000) concluded that the internet has negatively affected time spent watching TV. Though other studies suggest that the internet is not a substitute for but a supplement to traditional media (Kink and Hess, 2008), media substitution theorists (e.g., Kaye and Johnson, 2003) argue that traditional media will be replaced with new media if consumers perceive it to be functionally superior than older, traditional media.

Considering the ever-increasing importance of the internet in daily life, it is only natural that both researchers and practitioners in the media industry would find it important to understand the different reasons why consumers use the internet. And as consumers are faced with more and more media to choose from, getting to the heart of these needs will become more important for traditional media publishers (Hassan, Craft, and Kortan, 2003). The main objective of this paper is to determine the gratification motives of South African women for using the internet. In his investigation of electronic message boards, Rafaeli (1986), argued that "Uses and Gratifications Theory" – a mainstream research approach which has been applied to understanding audience consumption of traditional media – would be an appropriate theoretical framework from which to undertake research on the internet. This approach was subsequently adopted by other researchers such as Morris and Ogan (1996) and Ruggerio (2000). This paper also applies the Uses and Gratifications Theory to identify women's motivations for using the internet.

LITERATURE REVIEW

Uses and Gratifications Theory

Uses and Gratification Theory (UGT), considered one of the “most influential theories in media research” (Roy, 2009: 878) is a useful theoretical framework to use in understanding what motivates a consumers’ use of the internet (Eighmey and McCord, 1998). The theory attempts to explain the gratifications consumers seek in a particular medium and their perceptions of and affinity for that medium and its content (Ruggerio, 2000). The UGT has been instrumental in explaining why consumers choose and continue their use of a specific medium (Eighmey and McCord, 1998). Some researchers argue that continuing use of a medium would be highly unlikely if the medium did not provide consumers with specific benefits (Eighmey and McCord, 1998).

Early studies of internet usage associated it with the exploratory behaviour of consumers. It was found that consumers spent significant amounts of time simply “browsing” or “surfing” the internet (Pitkow and Recket, 1994). However, given the growth of the internet and its significant usage as medium (Nielsen, 2009), it is important to understand what motivates a consumers’ continued use of the internet. Stafford et al. (2004) provide a useful meta-categorisation of gratification factors sought from media. Through empirical investigation, these researchers identified three types of gratifications sought by consumers: content gratification, process gratification, and social gratification. Content gratification applies when consumers use a particular medium for the content it provides them. Content gratifications are obtained from the messages carried by the medium, e.g. entertainment information. Process gratification applies when consumers use a particular medium because they enjoy the process of using the medium (e.g. surfing the web, control over viewing). Social gratification applies when consumers use a particular medium to gratify their need for social interaction (e.g. friendship and interpersonal communication). Various researchers have used UGT to explain the gratification motives for internet usage as outlined in Table 1.

Women’s internet usage

In a report on gender and internet usage, Dholakia et al. (2003) point out that gender plays an important role in internet adoption. In many countries, the number of men using the web exceeds the number of women. A wide range of factors such as income levels, women’s participation in technology-related decisions, and attitude towards computers and technology account for the gender gap in internet usage (Dholakia, 2003). However, in some developed countries, the gender gap has virtually disappeared and is even showing a reverse trend (Yang and Wu, 2007). A study on internet usage by Jackson et al. (2001: 364) found that e-mail was

used more often by women than by men. The researchers attribute this result to women's greater need for interpersonal communication (Jackson et al., 2001). Men "surf" the web more often than women as they exhibited stronger motivations for information. However, no evidence could be found to indicate that men use the internet more often. Also, the researchers found that women in the study perceived computer technology as less important than men (Jackson et al., 2001).

Table 4 Overview of previous UGT studies

Study		Gratifications obtained		
Authors	Medium	Content	Process	Social
Berelson (1949)	Newspapers	Information, Advice for daily living, Framework for one's day		Preparing for upward mobility, Assurances about one's role in life
McQuail, Blumler and Brown (1972)	Television (Game shows)	Diversion, Education, Excitement		Personal relationships Personal identity
Berelson (1954)	Newspapers	Information, Practical aid for living, Escape, Vicarious Excitement		
Wang (1977)	Newspapers (Specific articles)	Information, Entertainment	Utility	Personal involvement
Blumler and McQuail (1968)	Television News	Surveillance, Guidance, Excitement		Anticipation of communication
Shaver (1983)	Cable Television	Variety	Control over viewing	
Rubin (1994)	Television	Relaxation, Entertainment, Information	Habit	Escape
Payne, Severn and Dozier (1988)	Magazines	Surveillance, Diversion		Interaction
Hoffman, Novak and Yung (1996)	Internet		Exploration (web browsing) Personal involvement	

			(importance)	
Rafaeli (1986)	Computer bulletin boards	Entertainment, Leisure		Keeping in touch To learn of others' opinions
Papacharissi and Rubin (2000)	Internet	Pass time Information seeking Entertainment	Convenience	Interpersonal utility (to interact with others)
Korgaonkar and Wolin (1999)	Internet	Information	Privacy Economic motivation	Interaction Socialisation Social escapism
Svennevig (2000)	Internet	Diversion	Imagination	Personal relationships Social relationships
Roy (2009)	Internet	Career opportunities Broader outlook	Ease of use Self-development	Global exchange Relaxation
Sheldon (2008)	Internet (Social media – Facebook)	Pass time Entertainment	Coolness	Relationship Maintenance Virtual Community Companionship
Shao (2008)	Internet (social media)	Information Entertainment	Ease of Use Control (Content-based control and interface control) Self-expression Self-actualization Mood management	Interaction

Findings such as these have fuelled studies to understand the gender gap between the two sexes' perceptions of computer technology (Dholakia et al., 2003). Using open-ended interviews with Australian women, Singh (2001) found that women did not see the importance in learning to use new computer technology. Women also did not see the internet as a place for "play" or entertainment. Singh concluded that when women "become comfortable with technology – as with the telephone or the PC – they see it as a tool rather than a technology" (2001: 374). Weiser (2000) found that while men used the internet to gratify entertainment and leisure needs, women's motives for internet use revolve around interpersonal communication and education.

RESEARCH METHODOLOGY

As the literature provides a rich resource of gratification factors to draw from, this study draws the list of possible gratification factors from the literature reviewed in line with the approach followed by researchers such as Stafford et al. (2004), Papacharissi and Rubin (2000), Chigona et al., (2008), and Payne et al. (2003). It uses thirty gratification statements drawn from the reviewed literature to measure the gratification motives. The statements are grouped into 10 a priori categories that capture the gratification motives found in the reviewed literature. These statements, summarized in Table 2, were used in the design of a 21-item survey instrument. The statements were operationalised on a 5-point Likert scale (5 = exactly, 1 = not at all) and respondents were asked how much their reasons for using the internet were on each statement. The survey instrument was a web-based survey which was published on an online research portal administered by a university.

The survey was administered to 16000 subscribers to six national women's magazines in the last week of November 2009. A census consisted of all subscribers whose e-mail addresses were captured by the subscription database for the magazines. To prevent non-response from Afrikaans-speaking respondents, the questionnaire was also translated into Afrikaans for readers of the Afrikaans magazines. An English and Afrikaans invitation to participate were designed and e-mailed via a bulk e-mail service to the participants. The e-mail contained information about the researcher, the purpose of the study, sponsorship of the study as well as the URL link to the survey. Online advertisements for the survey were also designed and published on six magazine websites. In order to increase the response rates, an opportunity to win a R1 500 gift certificate was offered to all respondents. Various studies (e.g. Brick et al., 2005; Singer and Bossarte, 2006) indicate that incentives increase the response rate by encouraging those already inclined to respond.

Table 5 Gratification motives and statements from previous UGT studies

Diversion (D): <i>“Relaxing and passing time with entertainment materials”</i> (Payne, et al. 2003: 117)	
To learn about celebrities	(Randle, 2003)
To pass the time when I’m bored	(Randle, 2003); (Payne et al., 1988)
For entertainment; to relax	(Randle, 2003); (Payne et al., 1988)
They offer stories with good illustrations and photographic content	(Randle, 2003); (Payne et al., 1988)
Social escapism (SE): <i>“A relaxant to relieve day-today stress, and to overcome loneliness”</i> (Korgaonkar and Wolin, 1999: 56)	
To escape to a fantasy world	(Korgaonkar and Wolin, 1999)
Whenever I read magazines, I lose track of time and forget about my surroundings	(Novak, Hoffman, and Yung, 2000)
Exploration (EX): <i>Exploratory behavior associated with curiosity and desire for variety</i> (Novak, Hoffman, and Yung, 2000)	
I enjoy browsing through unfamiliar magazines just for the sake of variety	(Novak, Hoffman, and Yung, 2000), (Papacharissi and Rubin, 2000)
When I hear about a new magazine, I’m eager to check it out	(Novak, Hoffman, and Yung, 2000)
Career opportunities (CO): <i>“Ease of seeking career and job opportunities and preparing for the global workplace”</i> (Roy, 2009: 882)	
Because they help me with career matters	(Randle, 2003); (Payne et al., 1988)
Because they help me with my job	(Randle, 2003); (Payne et al., 1988)
Surveillance S): <i>“Media use aimed at obtaining information about the world”</i> (Payne, et al. 2003: 117)	
Because they offer interesting stories	(Randle, 2003)
Because they teach me about common issues	(Randle, 2003); (Payne et al., 1988)
Because they help me keep abreast of events and trends	(Randle, 2003); (Payne et al., 1988)
Because they offer influential points of view	(Papacharissi and Rubin, 2000)
Economy (E): <i>“Use of media for shopping and buying motivations such as buying a stock or bond”</i> (Korgaonkar and Wolin, 1999: 58)	
To make buying decisions	(Randle, 2003)

Because it is affordable	(Korgaonkar and Wolin, 1999)
To find information about products and services	(Randle, 2003)
Information-seeking (IS): <i>“Use of media for acquiring useful information easily and in an inexpensive manner”</i> (Korgaonkar and Wolin, 1999: 57)	
To get in-depth information	(Randle, 2003)
To get information quickly and cheaply	(Randle, 2003)
To find specific information	(Randle, 2003)
Because I know the information is reliable	(Eighmey and McCord, 1998)
Interpersonal utility (IU): <i>“Preparing for anticipated conversations with others or for interpersonal activities in the larger social order”</i> (Payne, et al. 2003: 117)	
To organise my social life	(Sheldon, 2008)
To meet people with my interests	(Randle, 2003)
To find romantic relationships	(Sheldon, 2008)
Because they invite me to create my own content	(Shao, 2008)
Because they give me the freedom to express my opinion and feelings	(Randle, 2003)
Status (SS): <i>Media use is perceived as cool and confers social identity and status</i> (Sheldon, 2008)	
Because they make me appear modern/hip	(Sheldon, 2008)
To gain status	(Randle, 2003)
Self-development (SD): <i>“Use of media for self growth and development”</i> (Roy, 2009: 882)	
Because they inspire me to be more creative	(Roy, 2009)
Because they provide me with ideas to improve my lifestyle	(Randle, 2003)

Using the SPSS software package, principal component analysis with varimax rotation was performed on the gratification items to extract the gratification factors for each medium. The factor analysis used the Kaiser criterion that specified the retention of factors with eigenvalues greater than 1.0 (Costello and Osborne, 2005). Moreover, items for each factor had to meet the 0.40 factor loading criterion, a level often used in social sciences research (Costello and Osborne, 2005). In the case of cross-loading items, where an item had a loading greater than 0.4 across more than one factor, the item was retained to the factor where it had the highest loading (Costello and Osborne, 2005).

Prior to the survey, a pilot study was performed amongst five women who were representative of the participants. These women were both women's magazine readers and web users. Three were bilingual (Afrikaans-English) and tested both the Afrikaans and English versions.

FINDINGS AND DISCUSSION

Response rate

Overall, 939 responses were received. As the study focused on women's media use, responses from male respondents and incomplete questionnaires were excluded from analysis leaving 803 questionnaires for data analysis. Therefore, the response rate was about one percent.

Descriptive statistics of the sample

The largest group of respondents was in the age group 35-44 years (30.6%, n=246). An almost equally large proportion of respondents were between the ages of 45-54 (26.4%, n=212).

Regarding household income, the largest group of respondents (28.9%, n=232) fell in the R11 000 to R19 999 group. The second largest income group accounting for 24.3% (n = 195) of the sample were in households with an average monthly income of more than R20 000. This means that almost 50% of the respondents fell in very high-income brackets (LSM 9-10) as defined by the All Media Products Survey (SAARF, 2009).

Home and work were the two major access points and accounted for more than 90% of the response. Home use accounted for 48.3% (n=382) and work access accounted for 48.6% (n=384).

Most women (29.8%, n=234) spent 30 minutes to 1 hour online per day. The second largest group (21.5%, n=173) spent less than 30 minutes on the internet per day.

Six hundred and fifty-five of the respondents (81.6%) indicated that they use the internet for e-mail and chatting. Banking was the second most popular online activity (75%, n=602). Using the internet for work and business was also applicable to a large part of the sample (69.6%, n=559). A larger proportion of women (56.5%; n=454) access the internet for cooking and recipe information than for news information (52.8%, n=424). Only 43.8% (n=352) of the respondents claim to network through these sites regularly.

Internet gratification factors

The main objective of this study was to determine the gratification motives of South African women for using the internet. Using factor analysis (Table 3), seven factors with eigenvalues greater than one were extracted. These factors accounted for 66% of the total variance. Factor items with loadings of more than 0.40 are presented in Table 3. After factor extraction, three a priori gratification categories (see Table 2), namely Social escape, Economy, and Status no longer appeared as distinct factors. The seven remaining factors are: Interpersonal utility (factor 1), Information-seeking (factor 2), Surveillance (factor 3), Self-development (factor 4), Exploration (factor 5), Diversion (factor 6), and Career opportunities (factor 7) as outlined below. Using the meta-classification structure of gratification factors suggested by Stafford et al. (2004), these factors may be categorized as Social gratification (Interpersonal utility), Content gratification (Surveillance, Self-development, Career opportunities, and Diversion), and Process gratification (Information-seeking, and Exploration).

Factor 1 (labeled Interpersonal utility) with an eigenvalue of 10.50 contained seven items and accounted for 34.98% of the total variance. This was the only factor that emphasized interpersonal communication and interpersonal needs. According to this factor, the internet is perceived as a means to meet and connect with others, to share views with others, and to maintain relationships. With over 81 percent of the respondents indicating that they use the internet for e-mail and chatting, this lends support to the socializing, and community-building capability of the internet. In this case, use of the internet also relays some social status to the respondents. Factor 1 contained both a priori items categorized under Status and retained all the a priori Interpersonal utility items.

Factor 2, with an eigenvalue of 2.81 contained six items and accounted for 9.35% of the total variance. This factor deals with the actual process of searching for information and was therefore labeled Information-seeking. It is associated with the ease of use and convenience of the internet and also the credibility of information on the web. It contained all items from the Information-seeking a priori category as well as one item each from the Surveillance category and the Economy category. The high usage of the internet for banking (75%, n=602), business (69.6%, n=559) and news (52.8%, n=424) also reflects the internet's pivotal informational role (Korgaonkar and Wolin, 1999).

Factor 3, with an eigenvalue of 1.89 contained six items and accounted for 6.29% of the total variance. This factor labeled Surveillance is concerned with the use of the internet to stay up-to-date with current events, new information, and confirming one's worldview. The factor is characterized by items associated with the content respondents receive from the online sources and reflects the respondents' need for interesting and affordable content in the online environment. It contained three items from the Surveillance a priori category but also gained an item from the Economy category and two items from the Diversion a priori category. These items acknowledge the respondents' need for illustrated content and information regarding.

With an eigenvalue of 1.36 and containing three items, factor 4 and accounted for 4.53 % of the total variance. The emphasis in this factor is on the respondents' creativity, development and self-growth, hence the label Self-development. Using the internet, the respondents can improve themselves and their lifestyles. The factor retained all items from the Self-development a priori category but also gained an item from the Economy category. The confirmation of Self-development as an interpretable factor as defined by Roy (2009) highlights an interesting evolution of internet usage that is evident in the high incidence (56.5%; n=454) of users claiming to use the information for cooking, décor, and self-help. This suggests the use of the internet as a tool to find inspirational ideas for self-improvement.

Table 3: Factor analysis of internet gratification items (without poor loading items)

Gratification items (variables)	Mean	S.D.	Factors and factor loadings						
			1	2	3	4	5	6	7
I enjoy visiting unfamiliar websites just for the sake of variety (EX)*	3.77	0.998					.840		
When I hear about a new website, I'm eager to check it out (EX)	3.48	1.137					.817		
I often lose track of time and my surroundings when I'm online (SE)	3.89	1.111					.715		
To learn about celebrities (D)	2.80	1.195			.520				

Because they help me with my career (CO)	2.19	1.077							.771
They offer stories with good illustrations and photographic content (D)	3.53	1.000			.732				
Because they teach me about common issues (S)	3.91	0.874			.631				
Because they are affordable (E)	2.87	1.176			.535				
For entertainment; to relax (D)	4.35	0.764						.625	
To meet people with my interests (IU)	2.31	1.255	.592						
Because they provide me with ideas to improve my lifestyle (SD)	4.03	0.967				.728			
To escape to a fantasy world (SE)	3.00	1.378						.476	
To gain status (SS)	1.45	0.909	.754						
To get information quickly and cheaply (IS)	2.78	1.251		.511				.439	
To organize my social life (IU)	1.99	1.125	.553						
To find information about products and services (E)	3.62	1.050		.491					
Because they offer interesting stories (S)	3.88	0.978			.596				
Because they help me with my job (CO)	2.01	1.119							.772
To find specific information (IS)	2.93	1.057		.732					
Because I know the information is reliable (IS)	3.10	1.090		.790					
To get in-depth information (IS)	2.98	1.165		.850					

Because they offer influential points of view (S)	2.31	1.182		.645					
Because they give me the freedom to express my opinion and feelings (IU)	3.01	1.129	.512						
Because they help me keep abreast of events and trends (S)	3.90	0.920			.471				
To pass the time when I'm bored (D)	3.26	1.352						.721	
Because they make me appear modern/hip (SS)	1.74	1.105	.762						
To make buying decisions (E)	2.81	1.220				.547			
To find romantic relationships (IU)	1.23	0.704	.705						
Because they inspire me to be more creative (SD)	3.83	1.034				.779			
Because they invite me to create my own content (IU)	2.29	1.284	.516						
<i>Eigenvalues</i>			10.50	2.81	1.89	1.36	1.15	1.12	1.01
<i>% variance - Factor</i>			34.98	9.35	6.29	4.53	3.84	3.72	3.35
<i>% variance - Cumulative</i>			34.98	44.33	50.62	55.15	58.98	62.71	66.06
<i>Reliability (Cronbach α)</i>			0.83	0.83	0.84	0.81	0.85	0.82	0.68

* Brackets indicate assignment of items based on a priori gratification categories.

Factor 5, with an eigenvalue of 1.15 contained three items and accounted for 3.84% of the total variance. This factor labeled Exploration reflects the respondents' enjoyment of surfing the web. It also suggests that exploring the web is an absorbing activity as respondents' lose track of time and their surroundings when browsing the net. This factor retained all items from the Exploration a priori category and gained an item from the Social escapism category.

Factor 6, with an eigenvalue of 1.12 contained three items that and accounted for 3.72% of the total variance. The factor is concerned with relaxation, leisure and entertainment. It also reflects

the respondents' need to disconnect or escape from the real world. It contained two items from the Diversion category and one from the Social escapism a priori category and was labeled Diversion.

Finally, factor 7, with an eigenvalue of 1.01 contained only two items and accounted for 3.35% of the total variance. Labeled Career opportunities, this factor is associated with respondents' use of the internet for work and career purposes. It retained both the items in the Career opportunities a priori category and gained no other items.

To sum up, of the ten gratification factors identified in the literature, only seven were retained in this study. These were, in order of variance explained, Interpersonal utility, Information-seeking, Surveillance, Self-development, Exploration, Diversion, and Career opportunities. Four of the seven factors (namely Interpersonal utility, Information-seeking, Diversion, and Surveillance) are recurring motives for internet use throughout the literature. Two of the factors (Information-seeking and Interpersonal utility) emphasize the functional use of the internet, in support of Papacharissi and Rubin's (2000) description of internet use as purposeful and selective. In Papacharissi and Rubin's (2000) study, the Interpersonal utility factor was the most important internet gratification factor. Similarly, in this study, Interpersonal utility was also the most salient factor, with a greater focus on the social aspect of the internet. These results are therefore consistent with findings in previous studies (e.g. Korgaonkar and Wolin, 1999; Stafford et al., 2004; Roy, 2009).

CONCLUSION AND MANAGERIAL IMPLICATIONS

The development of the internet is considered to be one of the greatest technological inventions of the 20th century. In a relatively short span of time it has emerged as an important mass medium in the world, including South Africa. Its use as a vital communication, socialisation, commercial and entertainment channel has made it an integral part of daily life. The main objective of this paper is to determine the gratification motives of South African women for using the internet.

It was found that the main gratification motives for using the internet amongst the women surveyed were Interpersonal utility, Information-seeking, Surveillance, Self-development, Exploration, Diversion, and Career opportunities. With interpersonal utility accounting for about 35 percent of the variance explained in the factor analysis, it is evident that women

predominantly use the internet for social relations. Also important about the use of the internet under this factor here is the status that women claim to gain from using the internet. The second most important factor for using the internet is information-seeking. Women reported using the internet to search and obtain information quickly and cheaply. Under surveillance, the third gratification factor, women reported using the internet to keep abreast stories and events. In a general sense, the motivations for internet use identified in this study are consistent with those identified in previous UGT studies. The internet, it seems, is used for much more than information-gathering. The ease with which users can search through vast amounts of information (for free) in order to retrieve useful information is an appeal of the internet, but it was not as important as interpersonal utility or social gratification in this study.

The internet meets more needs than just users' informational desires and this should be taken into consideration. The managerial implication of this is that in addition to Interpersonal utility and Information-seeking, the provision of some content in areas labeled Surveillance, Self-development, Exploration, Diversion, and Career opportunities could add value for women internet users. Publishers of internet sites therefore need to consider augmenting the functional gratification requirement for information with elements that accommodate social gratification requirements such as provision of tools or avenues to facilitate social interaction. For other businesses including traditional media, the fact that women reported searching for information and stories on the internet suggests that ignoring the internet in their strategies for delivering value to their customers may prove detrimental in the long run.

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EMOTION WORK, EMOTIONAL INTELLIGENCE, SOCIAL SUPPORT AND JOB AUTONOMY AS PREDICTORS OF BURNOUT IN SECONDARY SCHOOL EDUCATORS IN GAUTENG

Abstract

Emotion and organisation factors influence the well-being of teachers. The aim of this article was to assess emotion work, emotional intelligence and organisational factors (job autonomy and social support) as predictors of burnout in secondary school educators in the public sector. A cross-sectional survey design was used. A non-probability convenience sample ($n=257$) was taken from educators in secondary schools in the Gauteng Province in public schools. The Schutte Emotional Intelligence Scale (SEIS), The Oldenburg Burnout Inventory (English version) (OBLI), Scales from the Frankfurt Emotion Work Scales (FEWS), and the Organisational Factor Scale (OFS) were administered. A multiple regression analysis showed that the display of negative emotions, supervisor support and job autonomy predicted burnout (exhaustion and mental distance). The implications are that educators must be made aware of the impact of these constructs on their own well-being in teacher training and education as part of public sector governance. Decision-makers in education must deal with these stressors and lessen burnout in educators by implementing pro-active policies and re-active strategies such as employee wellness interventions.

INTRODUCTION AND PROBLEM INVESTIGATED

Emotions are an integral part of education and teaching is an emotional practice (Hargreaves, 2002; Hargreaves, 2000). In this regard Geving (2007) argues for more focus on the role of emotion work that educators perform. Educators engage in emotion work when the emotions that they have to display (to students and management) are different from the emotions they feel. Isenbarger & Zembylas (2006, 123) refer to emotion work as a process where “individuals may have to regulate their emotions in the workplace to express something different from the emotions that are felt”. This dissonance between felt and displayed emotion can affect the well-being of teachers in the form of burnout as indicated in emotion work literature (Chan, 2006; Mikolajczak, Menil, & Luminet, 2007).

Burnout in educators is important and is increasingly receiving the attention of the research community (Pienaar & Van Wyk, 2006; Fives, Hamman & Olivarez, 2007; Jackson & Rothmann,

2005a). In South Africa, radical changes in the education system have had an influence on the well-being of educators (Ngidi & Sibaya, 2002). Among other things, corporal punishment has been abolished and alternative ways of dealing with disciplinary problems have had to be developed (Kyriacou, 2001; Shulze & Steyn, 2007). Educator stress is therefore a vital issue (Shulze & Steyn, 2007) that requires important ongoing research. Most educators are also dissatisfied with the reduction in their autonomy and the increasing attempt to control and intensify all aspects of their work. This dissatisfaction is often disguised by the performance of emotion work. The role that emotion work plays in educator burnout has therefore become an important research topic for educators in South Africa (Ogbonna & Haris, 2004).

However, research regarding the emotional aspects in the field of teaching has been neglected. Although international scholars have recently acknowledged that emotion work is present at different hierarchical levels and among many different occupational groups (Seery, Corrigan, & Harpel, 2008; Wilton, 2008; Yang & Chang, 2008), there remains a shortage of recent studies on the effect that emotion work plays in the prediction of burnout in a national setting. Jackson and Rothmann (2005a) emphasise the lack of empirical research which systematically investigates educator burnout in South Africa as a great concern.

Sharma (2007) has found that burnout can be prevented with early detection, timely intervention, and through the enhancement of emotional intelligence. There is therefore a need to probe and identify the determinants of burnout to enable the adoption of appropriate preventative measures in educators. Grandey (2000) proposes that emotional intelligence (as individual factor) and job autonomy/social support (organisational factors) should also be studied in addition to emotion work as factors predicting burnout.

The aim of this article was to provide a literature framework of emotion work, emotional intelligence, organisational factors (social support and job autonomy) and burnout and its possible value as predictors of burnout. Secondly, to assess the latter constructs as predictors of burnout statistically and lastly to discuss the implications of these findings from a management perspective, in the methods and results section the research methodology and findings will be presented. A literature review of the constructs will now be presented:

LITERATURE REVIEW

Burnout

In order to retain educators in South Africa burnout must be prevented and aspects that influence burnout levels should be investigated. Burnout is the physical, mental and emotional exhaustion resulting from chronic job stress and frustration (Maslach, Shaufeli & Leiter, 2001). It is a chronic affective response pattern to stressful work conditions where high levels of interpersonal contact are demanded (Van Wyk, 1998). In South Africa research results by Jackson and Rothmann (2005b) indicates mental distance as a construct of burnout, which along with exhaustion and professional efficacy, constitutes the syndrome among educators in South Africa. Mental distance in educators is when the educator exhibits a psychological distance toward recipients of their service.

Workers in human service organisations (e.g. police officers, social workers, nurses and teachers), are more vulnerable to high degrees of burnout. In comparison with other professions, teachers show high levels of exhaustion and cynicism, the core dimensions of burnout (Maslach, Jackson & Leiter, 1996, Shaufeli & Enzmann, 1998). Teacher's burnout has been found to be caused by excessive work, inadequate salaries, disciplinary problems, and lack of student interest, overcrowded classrooms, lack of support and public criticism of teachers and their work (Buthelezi, 2003, Mesthrie, 1999). To deal with these stressors and lessen burnout, educators should be made aware of aspects that can have an influence on their general well-being.

Burnout in teachers has negative consequences for the teaching profession and education and needs to be prevented. It affects the schools' study climate, lowers morale, prevents the attainment of educational objectives, and increase the probability of teachers leaving their posts. (Borg & Riding 1991). The determinants of burnout must be identified to enable the adoption of appropriate preventative measures. According to Grandey (2000) emotion work, emotional intelligence, social support and job autonomy can be investigated as possible predictors of burnout.

Emotion work

Recently emotion work received more attention in the educational literature (Constanti & Gibbs, 2004, Hakanen, Bakker & Schaufeli, 2006; Hargreaves, 2000; Kyriachou, 2001). Emotions are an integral part of education and of organisations more generally. Teachers are involved in

emotion work when they manufacture and mask emotions – when they enthuse about a new initiative, are overjoyed with a student’s breakthrough, show patience with a frustrating colleague or are calm in the face of parental criticism (Hargreaves, 2000).

The type of emotion work that employees are expected to show in the workplace is determined by the emotional display rules of the organisation. Emotion work theory by Hochschild (1983) propose that there are two strategies used in order to keep to the *display rules* of organisations: either *surface acting*, by which only the emotional expression is manipulated in order to fulfil the job demands; or *deep acting*, by which the feelings of the employee are actively manipulated in order to fulfil the job demands (Ashforth & Humphrey, 1993; Ashforth & Tomiuk, 2000).

Teachers are aware that when they display positive emotions toward students and emotionally support them, students tend to misbehave less. The performance of emotion work in educators is required both for a successful delivery of teaching to pupils but also as a strategy for coping with the need to conceal real feelings (Geving, 2007; Constanti & Gibbs, 2004). This puts stress on them to act in this manner for professional efficacy reasons (see Bru, Stephens, & Torsheim, 2002, Pugh, 2001). Secondary school educators need to display both positive and negative emotions as part of emotion work in order to successfully perform their work.

However, the display of positive and negative emotions in the emotion work that educators perform is one of the major causes of occupational stress and burnout as shown in a number of research works (Kim, 2008, Mann, 2005; Mikolajzak et al., 2007; Zhang & Zhu, 2008). It is thus crucial to include emotion work as a predictor of burnout in educators in a national setting. Apart from emotion work, emotional intelligence shows promise to explain burnout levels in educators.

The following hypotheses are formulated regarding emotion work as a predictor of burnout

H1: Emotion work predicts burnout in a sample of secondary school educators in Gauteng

Emotional intelligence

Emotional intelligence plays a role in the well-being of employees in work settings (see Goleman, 1995; Saarni, 1999; Salovey & Mayer, 1990). Sharma (2007) has found that burnout

can be prevented with early detection, timely intervention, and enhancement of emotional intelligence. Teachers that are less vulnerable to burnout are teachers that have the ability to manage their emotion.

According to the ability theory of emotional intelligence by Mayer and Salovey (1997) emotional intelligence is a multi-dimensional construct of four factors: verbal and non-verbal appraisal and expression of emotion; using emotions to assist in problem-solving; regulating one's own, as well as others' emotions; and promoting emotional growth using emotional knowledge. All of these constructs of emotional intelligence shows promise to lessen burnout in educators and play a positive role in educator well-being. The conclusion can be drawn that if emotional intelligence is proven as a significant predictor of the level of burnout in educators it can already be incorporated in the training and education of teachers in South Africa.

When secondary educators work in a service sector and effectively understand, realise and expresses emotions in the workplace, their emotional intelligence gives them the foundational ability to perceive the display rules of their workplace and learn about emotions in their particular context to perform the necessary emotion work (Hayes & Flannery, 2000). The concepts of emotional intelligence and emotion work overlap, because management of emotions necessitates the intelligence *to recognise, become skilled at, and regulate behaviour as required* (Fabian, 1999). Apart from emotion work, job autonomy must also be studied because both have an affect on well-being (Abraham, 2004). Job autonomy and its relationship to burnout will be discussed next.

The following hypotheses are formulated regarding emotional intelligence as a predictor of burnout

H2: Emotional Intelligence predicts burnout in a sample of secondary school educators in Gauteng

Job autonomy

Wharton (1993) found that the incidence of emotional exhaustion was influenced by a range of work factors including *job autonomy, tenure, and working hours*. An investigation of the job autonomy of teachers becomes crucial when investigating determinants of burnout. Job autonomy can have positive and negative effects on well-being. If the person feels adequate in

his/her work skills, has a balance workload, does not have a lack of variety of work tasks and knows there are opportunities for promotion he/she is experiencing positive well-being (Deery, Iverson & Walsh, 2002).

Most educators are however dissatisfied with the reduction in their autonomy and the increasing attempts to control work outputs (Ogbonna & Harris, 2004) that can negatively affect well-being. It is evident that it becomes vital to include job autonomy of educators as a possible predictor of the level of burnout. However, giving a worker job autonomy does not ensure motivating the worker, the worker also needs the support of supervisors and co-workers. According to action theory and stress research (Frese & Zapf, 1994; Zapf, 2002), job autonomy (flexibility in decision-making), together with supervisor- and co-worker support (social support) as well as their feedback must be investigated in the workplace as predictors of well-being.

The following hypotheses are formulated regarding emotional intelligence as a predictor of burnout

H3: Job Autonomy predicts burnout in a sample of secondary school educators in Gauteng

Social support

Social support has been identified as an important resource that enables an individual to cope with stress and prevent burnout (Russell, Alzheimer and Velez, 1987). Social support together with emotional intelligence as predictors of burnout should be investigated (Gallagher & Vella-Brodick, 2008)

The impact of social support extends beyond the immediate effect of ensuring that workers have the required resources, and that they are not experiencing high levels of stress or dissatisfaction. The perception that an organisation values their contributions and well-being can have a powerful effect on workers' attachment and commitment to the organisation (Rhoades & Eisenberger, 2002).

Supervisors can also provide social and emotional support. This is focused on meeting workers' needs to feel valued, cared for, respected and liked. Support can also be considered in terms of the roles, responsibilities and tasks that workers perform. Instrumental support involves providing practical and concrete assistance with key tasks and responsibilities (House, 1981;

Cohen & Wills, 1985). Support from managers and supervisors are particularly important. This is due to their status in the organisation and capacity to influence working conditions (Fenlason & Beehr, 1994; Beehr, King & King, 1990).

The following hypotheses are formulated regarding emotional intelligence as a predictor of burnout

H4: Social Support predicts burnout in a sample of secondary school educators in Gauteng

To summarize: emotion work is an integral part of education and teaching. The dissonance between felt and displayed emotion can affect the well-being of teachers. In this regard, emotional intelligence shows promise to lessen burnout. Most educators are also dissatisfied with the reduction in their autonomy and this can have a negative effect on educator wellbeing. Finally, social support has been identified as an important resource that enables an individual to cope with stress and prevent burnout. In the remainder of the study, the research objective, research methodology and results of the predictors of burnout will be provided. The study ends with a discussion of the results, and managerial implications.

RESEARCH OBJECTIVES

The objective of this study was to determine whether emotion work, emotional intelligence, job autonomy and social support predict burnout in a sample of secondary school educators.

RESEARCH METHODOLOGY

Research design

In order to address the objectives of this study, a cross-sectional survey design was used. Cross-sectional designs are used for simultaneously examining groups of subjects in various stages, while the survey describes a technique of data collection in which questionnaires are used to collect data about the identified population (Burns & Grove, 1993). This design is well suited for the descriptive and predictive functions associated with correlation research, whereby relationships between variables are examined (Shaughnessy and Zechmeister, 1997).

Participants

The sample included 257 secondary school educators in Gauteng and made use of an availability sample. All the completed questionnaires that were received at a set date were included in the data set. Secondary Schools participated on a voluntary basis. The participants were predominantly female (75, 5%). Furthermore, the sample consisted of White (84,8%), African (13,6%) and Coloured (1,6%) participants of which 60,3% were Afrikaans and 26,5% English speaking. 48,2 % of educators had a first university degree, and only 9,7% a post graduate degree. The majority of the sample was between 20 and 40 years (54,6% in total) old with the least participants in the 61-63 age group.

Measuring instruments

The measuring battery consisted of four instruments to measure emotion work, emotional intelligence, organisational factor scale (social support and job autonomy) and burnout.

Emotional Intelligence Scale (SEIS- 41 items version) (Schutte et al., 1998) assesses perception, understanding, expression, regulation and harnessing of emotions in the self and others. The model of Emotional Intelligence of Salovey and Mayer (1990) provides the conceptual foundation of the items used in this scale. Validation studies in South African samples (Jonker & Vosloo, 2008) indicated a six factor structure with alpha coefficients ranging from 0, 54 to 0, 73 in a university student sample.

The Oldenburg Burnout Inventory (English version) (OBLI) was used to measure Burnout. Demerouti, Bakker, Varadkou and Kantas (2003) have developed and offered initial construct validity evidence. Internal consistency of the OBLI is acceptable, with Cronbach's alpha scores ranging from 0, 74 – 0,87; scores all above 0,70.

The Frankfurt Emotion Work Scale (FEWS) (Zapf, Vogt, Seifert, Mertini & Isic., 1999) is based on the existing literature on emotion work, action theory and emotional regulation requirements.. Scales showed satisfactory reliabilities. Construct validation studies showed that emotion work scales were both positively and negatively related to psychological health (Zapf et al., 1999). Scales that indicate display of positive and negative emotions were measured to investigate emotion work in educators.

The Organisational Factor Scale (OFS). This scale measures job autonomy, co-worker and supervisory support). These constructs are measured with a self-developed questionnaire based on a literature review of job autonomy and social support and included 18 items which was divided into three subscales. All the items are scored on a five-point likert scale ranging from “I totally disagree to “Totally agree”.

Statistical Analysis

The statistical analysis was carried out with the help of the SPSS-programme (Muijs, 2004). Statistical analysis regarding reliability and validity, of the measuring instruments, descriptive statistics, principal component analyses and multiple regression analysis and cronbach alpha coefficients were used to determine the internal consistency, homogeneity and unidimensionality of the measuring instruments (Clark & Watson, 1995). A multiple regression analysis was done to determine the percentage variance in the experience of burnout explained by emotion work, emotional intelligence and organisational factors.

Ethics

The purpose of the study and ethical considerations was discussed with the participants in this study. The objectives of the study were explained and consent were obtained from the participants at their workplace. Confidentiality and anonymity were assured by participants not having to give personal details and by providing a confidentiality and anonymity statement on the booklet.

Results

Descriptive Statistics

Principal component analyses were conducted to establish the following factors of Emotion work: *display of positive emotions/display of negative emotions*. Factor analyses on the OLBI indicated two factors for burnout: *exhaustion and mental distance*. Emotional intelligence consisted out of *mood regulation/optimism, emotion management social skills, and emotion appraisal and emotion awareness*. The Organisational Factor Scale resulted in three factors: *social support of co-workers; social support of supervisors and job autonomy*. The Cronbach alpha coefficients of all the measuring instruments are considered to be acceptable compared to the guidelines of $\alpha > 0,70$ (Nunnally & Bernstein, 1994) except for the alpha coefficients of the following scales: emotion management social skills, emotion awareness and job autonomy,

which are below the accepted 0,70 guideline. It therefore appears as if most of the measuring instruments have acceptable levels of internal consistency.

Regression Analyses

The results of a multiple regression analysis with exhaustion and mental distance (as measured by the OBLI) as dependent variables and display of positive emotions, display of negative emotions (as measured by the FEWS), mood regulation/optimism, emotion management/social skills, emotion appraisal, emotion awareness (as measured by the SEIS), job autonomy, supervisory support, co-worker support (as measured by the OFS) as independent variables are reported in Table 1

Table 1
Multiple Regression analyses with Exhaustion and Mental distance as dependant variables.

Variable	Unstandardized	Standardized	t	p	F	R	R ²	ΔR ²	
Sig. F Model 1	B	SE	Beta						
Change Regression									
1	(Constant)	8.52	1.47	5.78	0.00	15.55	0.33	0.11	0.10
<i>p</i> =	Emotion Work								
0.00	Display of Positive Emotions	0.03	0.06	0.03	0.52	0.60			
	Display of Negative Emotions	0.21	0.04	0.32	5.41	0.00*			
2	(Constant)	13.08	1.59	8.22	0.00	14.53	0.47	0.22	0.11
<i>p</i> = 0.00	Emotion Work								
	Display of Positive Emotions	0.11	0.06	0.10	1.72	0.08			
	Display of Negative Emotions	0.15	0.03	0.24	4.10	0.00			
	Organisational								
	Job Autonomy	-0.14	0.04	-0.19	-	0.00*			
	Supervisor Support	0-.09	0.02	-0.24	-	0.00*			
	Coworker Support	0-.01	0.03	-0.02	-	0.72			
3	(Constant)	14.82	1.98	7.47	0.00	8.75	0.49	0.24	0.02
<i>p</i> = 0,23	Emotion Work								
	Display of Positive Emotions	0.13	0.06	0.12	1.98	0.04			

	Display of Negative Emotions	0.14	0.04	0.21	3.49	0.00				
	Organisational									
	Job Autonomy	-0.15	0.04	-0.19	-	0.00				
	Supervisor Support	-0.08	0.02	-0.21	-	0.00				
	Coworker Support	-0.00	0.03	-0.00	-	0.92				
	Emotional									
	Emotion	-0.06	0.03	-0.12	-	0.07				
	Management/Social Emotion Appraisal	0.03	0.03	0.07	1.81	0.25				
	Emotion	0.01	0.03	0.02	0.40	0.68				
	Mood Regulation	-0.04	0.03	-0.07	-	0.21				
	Regression 2:									
1	(Constant)	9.27	1.72		5.39	0.00	19.75	0.37	0.14	0.13
<i>p</i> = 0.00	Emotion Work									
	Display of Positive	0.07	0.07	0.06	1.02	0.30				
	Display of Negative	0.28	0.04	0.35	5.98	0.00*				
2	(Constant)	14.63	1.85		7.90	0.00	16.85	0.50	0.25	0.11
<i>p</i> = 0.00	Emotion Work									
	Display of Positive	.016	0.07	0.12	2.21	0.02				
	Display of Negative	0.21	0.04	0.27	4.68	0.00				
	Organisational									
	Job Autonomy	-0.17	0.05	-0.19	-	0.00*				
	Supervisor Support	-0.11	0.02	-0.25	-	0.00*				
	Co-worker Support	-0.00	0.03	-0.00	-	0.92				
3	(Constant)	16.14	2.31		6.98	0.00	9.8	0.51	0.27	0.02
<i>p</i> = 0,36	Emotion Work									
	Display of Positive	0.18	0.07	0.14	2.43	0.01				
	Emotions									
	Display of Negative	0.19	0.04	0.24	4.14	0.00				
	Emotions									
	Organisation									
	Job Autonomy	-0.17	0.05	-0.19	-	0.00				
	Supervisor Support	-0.10	0.02	-0.23	-	0.00				
	Coworker Support	0.00	0.04	0.00	.125	0.90				
	Emotional									
	Emotion	-0.06	0.04	-0.10	-	0.11				
	Management/Social Emotion Appraisal	0.02	0.03	0.05	1.59	0.45				
	Emotion	0.02	0.04	0.04	0.74	0.47				
	Mood Regulation	-0.03	0.03	-0.05	-	0.34				

**P* < 0.01

Table 1 shows that entry in the first step of model 1 (exhaustion) produced a statistically significant model ($F_{(2,248)} = 15,55$, $p = < 0,01$), accounting for approximately 11 % of the variance in exhaustion. More specifically, it seems that the display of negative emotions predicts exhaustion. When organisation factors (social support factors and job autonomy) were entered into the second step of the regression, a statistically significant model was again produced ($F_{(5,245)} = 14,53$; $p = < 0,01$) which explained 22 % of the total variance. It seems that job autonomy and supervisor support predicts exhaustion the best. When emotional intelligence factors were entered into the third step of the regression model, a non-significant model was produced ($F_{(9,241)} = 8,75$, $p > 0,01$). However, in total, emotion work, job autonomy and social support and emotional intelligence predicted 24 % of the variance in exhaustion.

In the regression with mental distance as dependant variable, entry of emotion work in the first step of the prediction again produced a statistical significant model ($F_{(2,248)} = 19,72$, $p = < 0,01$), explaining 14 % of the variance in mental distance. More specifically it was also the display (like in the case of exhaustion) that predicted mental distance. When organisation factors was entered into the second step of the model a significant model was produced ($F_{(5,25)} = 16,85$) which explained 23% of the total variance in mental distance. Job autonomy and supervisor support was also the most significant predictors. Emotional intelligence again failed to produce a significant model ($F_{(9,24)} = 8,75$). In total emotion work, organisation factors (social support and job autonomy and emotional intelligence predicted 27% of the variance explained in mental distance.

Hereby the second aim of this article was achieved namely to assess emotion work, emotional intelligence organisation factors (social support and job autonomy) statistically as predictors of burnout. The discussion of these results and the implication for education management from an organisational psychology point of view will follow :

DISCUSSION AND MANGERIAL IMPLICATIONS

The objective of this study was to determine predictors of burnout in secondary school educators in the Gauteng Province. The results indicated the following regarding the prediction of burnout:

It was rather environmental stressors than a lack of psychological strengths that are antecedents of burnout in the educator's work environment. Job demands (emotion work) or a

lack of job resources (supervisor support and job autonomy) predicted burnout. This indicates an acceptance of the following hypotheses:

H1: *Emotion work predicts burnout in a sample of secondary school educators in Gauteng*

H3: *Job Autonomy predicts burnout in a sample of secondary school educators in Gauteng*

H4: *Social Support predicts burnout in a sample of secondary school educators in Gauteng*

The results indicated that emotional intelligence did not contribute significantly to the variance explained in burnout. This indicates rejection of the following hypotheses:

H2: *Emotional Intelligence predicts burnout in a sample of secondary school educators in Gauteng*

This is in contrast to the research findings of Sharma (2007) who found emotional intelligence to be a predictor of burnout. The display of *negative emotions, job autonomy and supervisor support* predicted burnout (exhaustion and mental distance) the best in the educators in this study. The latter constructs pertain directly to the way in which the work environment is managed. This implies that in the presence of display of negative emotions without supervisory support and a lack of job autonomy, educators will experience burnout.

H1: *Emotion work predicts burnout in a sample of secondary school educators in Gauteng*

The significance of *emotion work* as predictor of burnout is in line with the results of Zhang & Zhu (2008). The implication is that (from an organisation management point of view), educators need to be attentive to their emotional reactions of negative display of emotions. This has implications for training as the answer may lay within the range of educational and training initiatives in human resource management within the education sector.

Emotion work is a relatively unknown construct which is rarely being explicitly recognised or taught. Consequently, the formulation of policies in the educator sector can result in increased emotion work if there is an unawareness of the negative effect of emotion work. Mann (2002) includes human resource strategies to counteract the negative effect of emotion work namely peer support programmes, stress management interventions and debriefing programmes. School principals and policymakers in the education sector must implement practices that have deal with the consequences of emotion work and burnout.

H3: *Job Autonomy predicts burnout in a sample of secondary school educators in Gauteng*

The role of job autonomy as predictor of burnout is in accordance to the finding of Wharton (1993). Role clarification and participation in decision-making are important aspects in job autonomy which will help to alleviate stress. The monitoring of burnout levels becomes inevitable and provision for professional counselling services as part of a coherent employee wellness programme could be implemented in the school environment. The results indicate that social support is an important resource that enables educators to cope with stress and prevent burnout.

H4: *Social Support predicts burnout in a sample of secondary school educators in Gauteng*

This is in accordance with the results of Mo (1991) who found that social support has a major influence on both stress and burnout. Teachers experiencing less stress and burnout were those who worked in supportive environments. The result of the influence of social support from an organisational psychology perspective implies that relationship management and people skills become important competencies of school principals on those in management positions. Educators want recognition and support in their efforts and those in leadership positions must be able to provide them with that.

The aim of this article was also to generate a literature framework of *emotion work, emotional intelligence, organisational factors (social support and job autonomy) and burnout* and its possible value as predictors of burnout. Secondly, these constructs were statistically assessed as predictors of burnout and lastly to discuss the implications of these findings from an organisational psychology perspective were presented in the discussion. The theoretical framework indicated that emotion work, emotional intelligence and organisational factors (social support and job autonomy) can be investigated as possible predictors of burnout.

The empirical study had certain limitations such as the cross-sectional survey design that was used, which made it impossible to prove the causality of the obtained relationships. It is necessary to study the causal relationship between emotion work, emotional intelligence, organisational factors (job autonomy, supervisor and co-worker support), engagement and burnout. The interaction effects among the four independent variables (emotion work, emotional intelligence, social support and job autonomy) were not accounted for. Further studies could use

a stratified random-sample design, which would ensure sufficient representation of different ethnic groups in South Africa.

In the study the predictors of burnout were statistically tested. From the possible predictors tested, the *display of negative emotions, supervisor support and job autonomy* were significant predictors of burnout in a sample of educators in Gauteng. The implication is that management in education must deal with stressors and lessen burnout in the teaching environment by implementing pro-active policies and re-active strategies such as employee wellness interventions. Educators and those in leadership positions must be made aware of the influence of *emotion work* on general well-being.

According to the literature review educators are dissatisfied with the reduction in their autonomy and the empirical data confirmed this by showing that job autonomy predicts burnout. Therefore *job autonomy* in the teaching environment must be managed to the benefit of the educator. Management styles in schools have to be adapted to prevent over-management of the teacher. *Social support* helps educators to cope with stress and prevent burnout. The implication from a business management and human resources perspective is that the educator wants to feel valued and feel supported in their efforts. Effort should be made in constructing the work environment as pleasant as possible. Relationship management and interpersonal relations thus become key competencies that school principals should be able to demonstrate in their repertoire of management skills. On the other hand, educators should be made aware of the benefits of supervisor support and must obtain skills to utilise this job resource to their advantage. Although emotional intelligence was not significantly related to burnout its value as positive constructs could in future studies be tested with the more positive side of well-being namely work engagement.

In order to fully understand the experience of emotion work and burnout in educators, future research can investigate these constructs qualitatively. Management practices must be investigated and the benefits of employee wellness interventions in the education profession tested.

In conclusion, this study has been valuable for the understanding of burnout and emotion work in teaching delivery and it provided insight into a better understanding of the predictors of

burnout in educators. These findings need to be taken into account in public sector governance in the education sector.

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**FACTORS INFLUENCING THE BILATERAL INTRA-INDUSTRY TRADE WITHIN SOUTH
AFRICA'S AUTOMOBILE INDUSTRY**

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Keywords: intra-industry trade, vertical intra-industry trade, horizontal intra-industry trade, gravity model, automobile industry, South Africa

Abstract

The study investigates factors influencing bilateral intra-industry trade (IIT) patterns between South Africa and trading partners in the automobile industry, crucial to managers within this industry. The econometric results of the gravity models of vertically differentiated IIT (VIIT) and horizontally differentiated IIT (HIIT) are statistically and economically significant in the context of the fixed effects method of estimation. The empirical results reveal that VIIT is the dominant IIT pattern and is

positively influenced by difference in economic size, trade openness, FDI and tariffs, whilst it is negatively affected by distance, economies of scale and automotive assistance. On the other hand, HIIT is negatively related to difference in economic size, FDI and automotive assistance whereas it is positively influenced by trade openness and depreciation of the exchange rate. The findings of this study propose advancing trade liberalisation and deregulation of the South African automobile industry to enhance IIT levels.

Keywords: vertical intra-industry trade, gravity model, automobile industry, South Africa

JEL: F14, L62

1. Introduction

With the progress of trade liberalisation, developing countries are increasingly engaging in intra-regional trade and intra-industry trade (IIT) to benefit from trade expansion and foreign investment flows. However, very few studies deal with IIT in the South African context (Parr, 1994; Isemonger, 2000; Petersson, 2005; Al-Mawali, 2005; Damoense and Jordaan, 2007; Sichei, Harmse and Kanfer, 2007). This study is concerned with the empirical investigation of the determinants of IIT patterns from a developing country perspective, namely South Africa and moreover focusing on a principal industry identified by the Department of Trade and Industry (DTI) as a strategic sector and catalyst for development and growth of the South African economy and African region.

The local industry comprise both vehicle assembly operations and component manufacturing that are well established and integrated into global production networks of major automotive multinational corporations (MNCs). Together, they contribute an estimated 21 per cent of South Africa's manufacturing output (NAAMSA, 2007). The industry employs large numbers of people and attracts significant foreign investment. South Africa's automobile industry has undergone significant structural reforms since the late 1980s and early mid-1990s (see Damoense and Agbola, 2009). The Motor Industry Development Programme (MIDP) is the present government policy that governs operations in the automobile industry. This policy was introduced in September 1995 and is expected to end in 2012, to be replaced by the Automotive and Production Development Programme (APDP).

In light of the above, the application of IIT theory to the South African automobile industry is an important contribution to the IIT literature and valuable to trade policy analysts and automotive manufacturers and managers. The focus on the automobile industry represents an important case of IIT to study because the structure and conduct of the industry is aligned with several features of IIT theory and international production and fragmentation theory. In addition, the significance of trade in automotives is not only important for South Africa but offers a key ingredient for regional development in Africa.

The theoretical and empirical distinction of IIT into patterns of HIIT and VIIT has become crucial because each IIT pattern may potentially be influenced in different manners by country and industry factors (Greenaway, Hine and Milner, 1995). Thus, this study draws hypotheses from theoretical models of HIIT (Helpman and Krugman, 1985; Markusen and Venables, 2000) and VIIT (Falvey and Kierzkowski, 1987; Flam and Helpman, 1987), including fragmentation theory (Feenstra and Hanson, 1997; Deardorff, 1998; 2001; Jones and Kierzkowski, 2001; 2005) and develops a methodology to empirically test determinants of HIIT and VIIT patterns using panel data econometric techniques. Thus, the objective of this study is to empirically investigate country- and industry-specific determinants of expanding the share of IIT in total trade between South Africa and main bilateral trading partners in automobile industry. There is evidence to suggest that by expanding the share IIT in total trade tend to impose lower factor market adjustment costs relative to increasing the share of OWT trade in total trade (Helpman and Krugman, 1985) because any displaced factors will be reallocated *within* industries instead of *between* industries which is applicable to the latter.

The study is organised in the following manner. Besides this introduction, Section 2 provides a review of related empirical studies of IIT patterns. Section 3, provides a discussion of the methodology used to empirically measure the intensity of IIT and to decompose total IIT (TIIT) into patterns of VIIT and HIIT in the automobile industry. Also, in Section 3, evidence of IIT trade patterns in South Africa's automobile industry is presented. Section 4 describes the econometric methodology and data used in the study. Section 5 presents the econometric results and Section 6 discusses the econometric results. Section 7 concludes.

2. A review of related empirical studies of IIT patterns

The majority of past studies examine the key roles of country-specific factors, such as average market or economic size and living standards, absolute and relative economic distance and geographical distance on IIT. On the other hand, fewer studies have examined industry-specific factors on IIT. In addition, there are a limited number of *sole* industry studies that examine the determinants of IIT in the empirical literature. These have been conducted in several industries; namely food processing sector (Hirschberg *et al.* 1994); milk products (Fertö, 2005); toy industry (Tharakan and Kersten, 1995); fabrics (Kind and Hathcote, 2004); textiles and apparel (Clarke and Reese, 2004); electrical parts and components (Kimura, Takahashi and Hayakawa (2007); machinery parts and components (Ando, 2006; Fukao, Ishido and Ito, 2003); automobiles and parts (Montout, Mucchelli, and Zignago, 2002; Umemoto, 2005; Türkan, 2009) and the information and technology (IT) industry (Chang, 2009).

According to the empirical literature, the larger the size of the market as proxied by the bilateral average of gross domestic product (GDP) of the two partners, the greater the benefits that can be derived from potential economies of scale (supply) and the greater the demand for differentiated products thereby contributing to higher levels of IIT. Several empirical studies investigate the impact of average living standards by using GDP per capita expressed as an average of the bilateral trading partners. According to the Linder (1961) hypothesis, trade between countries that possess similar per capita incomes will be intensified if countries specialise in producing differentiated products and export these products to partner countries with similar demand compositions, hence the higher the intensity of bilateral HIIT. Conversely, the larger the gap in per capita income (or capital-labour ratio) between trading partners, the higher the level of bilateral VIIT is predicted to be.

Both absolute and relative difference in economic size is used to capture the influence of difference in factor proportions and endowments between nations. The relative measure is regarded as a better measure compared to the absolute measure of difference in economic size as the latter one is sensitive to the trading partner's size whereas the former is standardised and normalised to one. Fontagné, Freudenberg and Péridy (1997) find that VIIT is positively influenced by larger relative difference in economic size implying that dissimilar countries in respect of factor endowments and technologies trade in products differentiated by quality (Falvey and Kierzkowski, 1987). On the other hand, larger relative difference in economic size negatively affects HIIT indicating that similar countries trade in products differentiated by variety

(Helpman and Krugman, 1985). In the context of international production and fragmentation, the economic size of the trading partner is expected to promote larger fragmentation of the production process between nations (Türkan, 2009). In the studies by Montout *et al.* (2002), Thorpe and Zhang (2005) and Zhang and Li (2006), the relative difference in economic size was positively associated with VIIT and negatively associated with HIIT.

The geographic proximity between bilateral trading partners as measured by the distance (DIST) variable is a key determinant of IIT. Greater distances impose large transport costs and trade costs thereby reducing the intensity of IIT. Therefore, most empirical studies find that geographical distance negatively influence IIT (Chemsripong, Lee, and Agbola, 2005; Clarke, 2005, Türkan, 2005; Okubo, 2007). However, several studies find IIT to be positively influenced by distance (Kind and Hathcote, 2004; Zhang, van Witteloostuijn and Zhou, 2005; Zhang and Li, 2006). As a result of greater regional integration, advancement in information and communications technologies (ICT) and reduction in international transport costs (shipping, air and road), it may be that distance do not necessarily deter IIT.

Several studies examine the influence of FDI on IIT trade patterns and conclude that the larger the FDI in an industry, the greater the levels of IIT. A number of studies presuppose that FDI is strongly associated with multinationals activities. Multinational firms and their FDI strategies play a pivotal role in fragmentation theory of international production and VIIT (Feenstra and Hanson, 1997; Fukao *et al.*, 2003). Yeaple (2003) shows that MNCs can be both vertically and horizontally integrated by establishing affiliates and structure FDI in some foreign nations to benefit from factor price differentials and in other nations to avoid transport costs. The empirical literature shows that FDI can affect horizontal and vertical patterns of IIT in different ways (Zhang and Li, 2006). Veeramini (2007) assessed the impacts of FDI associated with multinational engagements and considered interactions with trade barriers on the intensity of IIT in Indian manufacturing industries. He reports FDI to be positively correlated with IIT suggesting that IIT levels increases with greater multinational involvement. He also finds interactions between trade barriers and FDI negatively influence IIT reflecting the presence of horizontal multinational activities associated with market-seeking FDI. Similar findings have been reported by Byun and Lee (2005); Chang (2009) and Zhang *et al.* 2005). In Fukao *et al.* (2003) and Zhang and Li (2006) a positive relationship between FDI and the share of VIIT is found in the context of international theory of fragmentation.

Trade barriers is used as a proxy for trade costs and include natural barriers (distance, land and border), man-made barriers (cultural and language) and tariff and non-tariff barriers (NTBs). Since trade barriers are difficult to measure, the majority of empirical studies use tariffs as a proxy for trade barriers (Al-Mawali, 2005; Kind and Hathcote, 2005; Veeramani, 2007) although imperfect in capturing the effects of NTBs. The influence of NTBs on IIT has received less attention in the IIT empirical literature compared to tariffs (Fontagné and Fredenberg, 1997; Sharma, 2004). Gruen (1999) argue that the impact of NTBs on IIT has not been adequately explored in the IIT empirical literature. Typically, a negative relationship between trade barriers and the share of IIT is predicted (Hellvin, 1996; Sharma, 2004; Veeramani, 2007). In contrast, there are a limited number of studies that reveal a positive relationship between trade barriers and IIT (Kind and Hathcote, 2004; Al-Mawali, 2005). In particular, Al-Mawali (2005) relates the positive impact of the level of tariffs on bilateral IIT in South Africa's manufacturing sector to provisions of the MIDP that is argued to have encouraged multinational activity in the South African automobile industry.

Besides tariffs, this study introduces a novel industry explanatory variable, namely automotive assistance which can take the form of several instruments, for example, duty drawbacks, subsidies and investment incentives, etc. that are typically provided under the direction of selective government policy aimed at strengthening the domestic industry by essentially protecting producers to increase domestic production especially to enhance exports and to provide employment). This variable is expected to capture the effects of assistance or protection afforded to selective industry on the intensity of IIT patterns in the automobile industry. The description of the proxy for this explanatory variable is provided later in the study.

The empirical literature shows economies of scale (EoS) is a vital determinant influencing the intensity of IIT. Schmitt and Yu (2001) establish a positive causal link between the degree of economies of scale, the volume of IIT and the share of trade in production. By contrast, Davis (1995) and Bernhofen (2001) argue that EoS may not be a necessary condition for the presence of IIT. Several studies use minimum efficient scale (MES) as a proxy for EoS to examine its impact on IIT (Hu and Ma, 1999; Montout *et al.*, 2002). In the case of HIIT, Montout, *et al.*, (2002) found a negative sign on the MES coefficient indicating the presence of a small number of firms. Whilst other authors found a positive sign on the MES coefficient for VIIT suggesting that greater EoS stimulates VIIT (Aturupane *et al.* 1999; Greenaway, *et al.* 1999). Alternately, a negative coefficient is also found on EoS coefficient for VIIT supporting the argument that larger

plant sizes are conversant with lower units costs of production thus reducing the incentive to outsource production activities and thereby reducing the propensity to engage in IIT differentiated by quality (Feenstra and Hanson, 1997; Clarke and Stanley, 1999; Thorpe and Zhang, 2005), especially in the context of international production and fragmentation of the production process. Also, Clarke (2005), Sharma (2004) and Türkan (2005) find no statistical evidence of EoS influencing the intensity of IIT patterns. Thus, the empirical results for investigating the impact of EoS on IIT patterns are rather inconsistent.

Several studies assess the impact of regional integration on levels of IIT (Menon and Dixon, 1999; Sharma, 2004; Montout, *et al.* 2002; Chemsripong *et al.* 2005; Umemoto, 2005; Chan, 2009). Trade agreements serve to reduce trade barriers between trading countries and therefore cause an increase in IIT. Most studies reveal a positive relationship between regional integration and IIT (Montout, *et al.*, 2002; Chemsripong *et al.*, 2005, Kind and Hathcote, 2004). Similarly, Umemoto (2005) argues that the Korea-Japan FTA is predicted to contribute to significant growth of IIT in automotive parts between them. In Chan's (2009) investigation of the determinants of IIT patterns in IT industry among Asian, the United States of America (USA) and European Union (EU) markets. He argues that regional trade associations such as Association of South East Asian Nations (ASEAN) contributed to strengthening IIT in the IT industry between Asian and EU firms.

The degree of product differentiation is an important determinant of IIT has been assessed by several authors (Fontagné, *et al.*, 1997; Hu and Ma, 1999; Bernhofen and Hafeez, 2001; Byun and Lee, 2005; Faustino and Leitão, 2007; Veeramani, 2007; Chang, 2009). However, the empirical results of the effects of product differentiation on IIT are quite mixed. Several studies differentiate between vertical product differentiation and horizontal product differentiation (Bernhofen and Hafeez, 2001; Byun and Lee, 2005; Faustino and Leitão, 2007). Several authors (Hellvin, 1996; Hu and Ma, 1999; Veeramani, 2007) report significant negative coefficients on the PD for HIIT, whereas Aturupane, *et al.*, (1999) and Chang (2009) reveal statistically significant positive findings for VIIT. In addition, some empirical studies of IIT report no statistical evidence to support the claim that product differentiation has any significant impact on the intensity of IIT (Sharma, 2004; Clarke, 2005; Veeramani, 2006) suggesting that the degree of product differentiation is not important in explaining IIT. The insignificant findings of the PD variable may be attributable to the reliability of proxies for PD in the empirical literature.

Byun and Lee (2005) argue that an improved measure of PD is perhaps warranted to improve its significance as an explanatory variable explaining IIT patterns.

Few studies examined the impact of the exchange rate on IIT (Hirschberg *et al.*, 1996; Fontagne *et al.* (1997); Montout *et al.* 2002; Byun and Lee, 2005; Thorpe and Zhang, 2005; Sichei *et al.* (2007). The trade literature is unclear regarding the influence of the exchange rate on IIT (Thorpe and Zhang, 2005). In Montout *et al.* (2002), depreciation of the bilateral exchange rate positively influenced both HIIT and VIIT in NAFTA's automobile industry (Montout *et al.* 2002). On the other hand, Hirschberg *et al.* (1994) found that the exchange rate negatively influenced IIT in while Türkan (2009) found no significant impact of the exchange rate on IIT

3. Evidence of IIT patterns in the South African automobile industry

Despite the fact that several authors constructed alternative measures of IIT (Abd-el-Rahman, 1991; Fontagné and Freudenberg, 1997; Brulhart, 1994; Nilsson, 1999; Kandogan, 2003), the Grubel and Lloyd (GL) (1975) indicator is still widely used to measure the extent of IIT in total trade. This is so in spite of disagreements that remain unresolved in the empirical literature (Fontagné and Freudenberg, 2001). Over time, developments in the empirical IIT literature recognised the importance of disentangling total IIT (TIIT) into patterns of VIIT and HIIT (Falvey, 1981; Falvey & Kierzkowski, 1987). This study adopts the approach by Fontagné and Freudenberg (FF) (1997) following Abd-el-Rahman (1991) to distinguish between inter-industry (one way trade) and IIT. This index considers trade as IIT when the value of the minority trade flow represents at least 10 per cent of the majority trade flow according to Equation (1). In other words, if there is significant trade overlap as measured by Equation (1), IIT is identified. Otherwise, OWT occurs.

$$FF_{ij,kt} = \frac{\text{Min}(X_{ij,kt}, M_{ij,kt})}{\text{Max}(X_{ij,kt}, M_{ij,kt})} \geq 10\% \quad (1)$$

Where X=exports and M=imports, *i*=home country, *j*=partner country and *k*=product in period *t*. Now, once the trade flow is identified as IIT⁴, the share of IIT can be empirically separated into HIIT and VIIT using the methodology advocated by Falvey (1981) and Falvey & Kierzkowski (1987). They presume that differences in price (unit value) are reflected in differences in quality.

⁴ It is accepted in the literature that if the computed index is lower than 10 per cent for any given product category, then trade may be considered to be OWT, otherwise IIT exists.

Unit values of exports (imports) are calculated by dividing export (import) values by corresponding export (import) quantities.

Thus, HIIT in industry k exists if the criterion in Equation (2) is satisfied:

$$1 - \alpha \leq \frac{UV_{ij,kt}^X}{UV_{ij,kt}^M} \leq 1 + \alpha \quad (2)$$

Where UV=unit value of X and M, α =specified threshold (unit value) = 25 per cent and all other variables are as defined above. In previous studies, Abd-el-Rahman (1991), Greenaway, Hine and Milner (1994) and Aturupane, *et al.* (1999) and Fontagné & Fredenberg (1997) used UVs of 15 percent and 25 percent (where $\alpha = 0.15$; $\alpha = 0.25$). In this study 25 per cent is employed⁵. Now, VIIT in industry k exists when:

$$\frac{UV_{ij,kt}^X}{UV_{ij,kt}^M} < 1 - \alpha \quad \text{or} \quad \frac{UV_{ij,kt}^X}{UV_{ij,kt}^M} > 1 + \alpha \quad (3)$$

A summary of the steps employed in the methodology used to empirically measure the intensity of IIT and to disentangle IIT into VIIT and HIIT patterns are provided in Table 3 in the Appendix. The study reveals that bilateral IIT between South Africa and 20 partner countries in the automobile industry is largely dominated by VIIT as expected *a priori*. The computed shares of TIIT, VIIT and HIIT are provided in Table 1. Accordingly, VIIT is the dominant IIT pattern for South Africa–ROW automotive trade where the share of VIIT in TIIT is equal to 87.1 per cent and 94.3 per cent in 2000 and 2007, respectively¹⁰. By contrast the share of HIIT in TIIT is low reaching 12.9 per cent in 2000 and falling to 5.72 per cent in 2007.

Table 1. South Africa's IIT patterns in the automobile industry

	2000			2007		
Country	VIIT	HIIT	TIIT	VIIT	HIIT	TIIT
ROW	0.506	0.074	0.581	0.643	0.039	0.682

⁵ In this study, a simple robustness test was performed by setting $\alpha=15\%$ and 35% , randomly to consider influences from exchange rate fluctuations, etc. As suggested by Greenaway, *et al.* (1994) and Fontagné and Freudenberg (1997), the findings are insensitive to the chosen range and thus do not alter the main findings of the study.

¹⁰ In the discussion here, shares of VIIT and HIIT in TIIT are computed as follows: [(VIIT/TIIT) + (HIIT/TIIT) = 1 (=TIIT)] in order to illustrate the dominance of the VIIT pattern. This computation is different to the shares of IIT patterns reported in Table 1 and in the parenthesis in the discussion. These shares of IIT patterns are computed as VIIT + HIIT (= TIIT) + OWT = TT.

<i>NAFTA</i>						
United States	0.501	0.005	0.506	0.481	0.090	0.571
<i>Asia-Pacific</i>						
Japan	0.116	0.000	0.116	0.749	0.000	0.749
China	0.022	0.000	0.022	0.065	0.000	0.065
India	0.094	0.001	0.095	0.047	0.033	0.080
Australia	0.054	0.000	0.054	0.085	0.063	0.148
<i>Europe</i>						
Germany	0.481	0.050	0.531	0.286	0.023	0.309
United Kingdom	0.533	0.025	0.558	0.437	0.017	0.454
Spain	0.089	0.039	0.128	0.148	0.239	0.387
France	0.176	0.001	0.177	0.186	0.270	0.456
Sweden	0.006	0.000	0.006	0.136	0.000	0.136
Italy	0.159	0.015	0.174	0.156	0.058	0.214
Turkey	0.115	0.041	0.156	0.055	0.000	0.055
<i>MERCOSUR</i>						
Brazil	0.171	0.045	0.216	0.077	0.007	0.084

Source: Compiled from Quantec database

Notes: In the Table above, VIIT + HIIT (= TIIT) + OWT = TT, where TT is total trade. Shares of OWT are not provided.

Next, bilateral IIT between South Africa–Japan (11.6 per cent to 74.9 per cent) and South Africa–USA (50.6 per cent to 57.1 per cent) reveal rising levels over the 2000–2007 period with VIIT being the dominant IIT trade pattern reaching levels of 100.0 per cent and 84.2 per cent of total IIT in 2007. Declining IIT trends are experienced by Germany (53.1 per cent to 30.9 per cent) and UK (55.8 per cent to 45.4 per cent) between 2000 and 2007. Nonetheless by 2007, VIIT account for 92.6 per cent and 96.3 per cent of total IIT for Germany and UK, respectively.

Shifting trade patterns from OWT to IIT between South Africa–Spain (12.8 per cent to 38.7 per cent) and South Africa–France (17.7 per cent to 45.6 per cent) is illustrated. Interestingly, for Spain and France, HIIT (61.8 per cent and 59.2 per cent of TIIT, respectively) exceeds that of VIIT (38.2 per cent and 40.8 per cent, respectively) in 2007 implying that these countries prefer trading products differentiated by varieties with South Africa. Diminishing shares of IIT are

revealed for trade between South Africa-India and South Africa-Brazil for the same period, although IIT is still dictated by VIIT. Significant bilateral VIIT is found for South Africa–Brazil between 2000 and 2007 (79.2 per cent to 91.6 per cent of TIIT) and for South Africa-India between 2003 and 2007 (100.0 per cent to 58.8 per cent of TIIT).

Although experiencing low levels of TIIT, VIIT is still the dominant IIT pattern for Italy, Turkey, Australia, China and Sweden as is illustrated in Table 1. Trade with several other Asia-Pacific countries; Thailand, Taiwan, Republic of Korea, China (Hong Kong) reveals minimal IIT levels and the apparent dominance of OWT. Similarly, trade between South Africa and Mozambique, Zambia and Angola is dominated by OWT¹¹. Interestingly, bilateral IIT levels for South Africa–Zambia and South Africa–Mozambique were in excess of 10.0 per cent in early 2000 but then decreased substantially to less than 2.0 per cent by 2007.

In summary, the findings signify the existence of high shares of VIIT dominating TIIT between South Africa and trading partners in the automobile industry. This reflects differences in income levels, factor endowments and human capital and technology intensities between dissimilar trading nations. Although not illustrated and discussed here, within VIIT, South Africa produce and export high quality differentiated automotive products contrary to theoretical expectations (Falvey and Kierzkowski, 1987; Flam and Helpman, 1987) that lower income countries produce and export low quality vertical products whereas the opposite is true for higher income nations. Similar findings have been reported by Ando (2006) for machinery parts and components in East Asia trade. This view is consistent with Alleyne and Subramanian (2001) that argue South Africa has a comparative advantage in capital producing and exporting capital intensive products despite its labour abundance.

Thus, there is evidence that VIIT in the automobile industry can partially be underpinned by the theory of fragmentation of internationalisation of production whereby factors such as relative factor endowment and wage differences, MNC activities and FDI, trade and service link costs, government policy, among others are important (Fukao *et al.* 2003; Kimura *et al.* 2007). The findings also indicate that HIIT is not as important in South Africa's automobile industry while

¹¹ Although bilateral IIT levels for Zambia and Mozambique are greater than 10 per cent. They were not included in the gravity model due to data unavailability of most their explanatory variables.

OWT explained by traditional trade models of comparative advantage remains omnipresent for trade between South Africa and several trading partners¹².

4. Econometric methodology and data

This study adopts a three dimensional panel data set (time t , reference country i and partner country j) to conduct an econometric investigation of the determinants of IIT patterns covering the years 2000 to 2007. More specifically, a gravity model is adopted in this study as first proposed by (Isard, 1954) and adopted later by others (Tinbergen, 1962; Pöyhönen, 1963) to examine and make predictions about bilateral trade flows. The gravity modelling approach is an *ex-post* analysis using time series and cross-section data (panel data).

The panel regression model is specified (Baltagi, 2005) as:

$$y(z)_{ijt} = \alpha_n + \beta X_{it} + u_{ijt} \quad i=1\dots N; t=1\dots T \quad (1)$$

where: y_{ijt} = IIT indices between the home country i and its trading partner j for period t , and (z) varies over TIIT, VIIT and HIIT. X is a K -dimensional vector of explanatory variables including country-specific and industry-specific variables with variation in dimensions n and t , where α_n = country effect, $n=1\dots N$, $t=1\dots T$ and u_{it} = white noise disturbance term that is independent and randomly distributed with $(E u_{it})=0$; $\text{Var} (u_{it})=\sigma^2 > 0$. The specific effect (α_n) can be treated as fixed parameters or random parameters, namely fixed effects and random effects models.

4.1 Dependent variable

The dependent variable used in gravity model specification is the share of IIT that varies over TIIT, VIIT and HIIT where the computed shares of each IIT pattern lie between 0 and 1. The study adopts a lin-log model specification using OLS to estimate the determinants of IIT patterns in the South African automobile industry.

4.2 Hypotheses of the empirical determinants to be tested

The study performs empirical analyses using pooled, fixed effects and random effects models

¹² Similar findings have been reported by Ando (2006) for auto industry trade in East Asia. He argues that auto trade in developing countries can largely be explained by OWT attributable to import substituting policies adopted by these countries.

for three regression models of TIIT, VIIT and IIT. All explanatory variables used in the regression analysis are expressed in natural logarithms.

4.2.1 Relative differences in economic size (RDGDP)

Hypothesis (1): The greater the relative difference in economic size between trading nations, the larger the share of VIIT whereas the smaller the share of HIIT. Most empirical studies reveal a statistically significant relationship between the share of IIT and relative difference in economic size of bilateral trading partners. As in Balassa and Bauwens (1987), the relative difference in economic size is expressed as:

$$RDGDP_{ij,kt} = 1 + \frac{[w \ln w + (1-w) \ln(1-w)]}{\ln 2} \quad \text{where } w \equiv \frac{GDP_i}{GDP_i + GDP_j} \quad (5)$$

Where GDP_{ijt} =gross domestic product and $RDGDP_{ijt}$ =relative difference in GDP between country i and j , where the $RDGDP_{ijt}$ varies between 0 and 1 and is independent of the absolute market size of the partner country. On the production side, countries similar in size tend to trade more in different variety products (Helpman and Krugman, 1985), thus a negative relationship between HIIT and RDGDP is expected. Alternately, according to the H-O hypothesis (Falvey, 1986; Falvey and Kierzkowski, 1987) countries with larger relative differences in factor endowments, proportions and technologies will trade more, thus a positive relationship between VIIT and RDGDP is expected. The sign for TIIT will depend on the dominant IIT pattern.

4.2.2 Geographic distance (WDIST)

Hypothesis (2): The greater the geographical distance between trading partners, the lower the shares of all IIT. Geographic distance is typically used as a proxy for transport costs, insurance costs, delivery times and market access barriers. Since the commonly used distance variable (DIST) (Hu and Ma, 1999; Sharma, 2004; Veeramani, 2007) is time-invariant, thus it could not be estimated using the fixed effects model specification. However, Martinez-Zarzoso and Nowak-Lehman (2001) recommend estimating a second stage regression model, where individual effects are regressed on DIST as well as other time-invariant explanatory variables (See footnote 12). Nevertheless, this study adopts the weighted distance (WDIST) variable which varies over time and is computed as follows:

$$WDIST_{ij,kt} = \frac{DIST_{ij} * GDP_{jt}}{\sum_{j=1}^{13} GDP_t} \quad (6)$$

As greater distances between trading partners leads to lower IIT, a negative relationship between the share of VIIT, HIIT and TIIT and the distance parameter is expected.

4.2.3 Trade openness (TO)

Hypothesis (3): The greater the degree of trade openness, the larger the shares of VIIT, HIIT and TIIT. Several studies use a trade orientation (TO) variable as a proxy for trade openness (Chemsripong *et al.* 2005; Thorpe and Zhang, 2005; Clarke and Stanley, 2003; Clark, 2005; Zhang and Li, 2006). The TO variable is estimated by constructing residuals from a regression with trade (exports plus imports) per capita as the dependent variable and population (POP) and gross national income per capita (GNI) as explanatory variables (Stone and Lee, 1995). The expected sign is positive for TO for all IIT patterns.

4.2.4 Foreign direct investment (FDI)

Hypothesis (4): Greater levels of efficiency-seeking FDI, the larger the shares of VIIT and the smaller the shares of HIIT. Alternately, higher levels of market-seeking FDI, the smaller the shares of VIIT and the bigger the shares of HIIT. FDI and its effects on IIT and its components have been investigated in the empirical literature (Hu and Ma, 1999; Byun and Lee, 2005; Zhang *et al.*, 2005; Zhang and Li, 2006; Veeramani, 2007; Chang, 2009). Generally, FDI is hypothesised to be positively correlated with the share of IIT. More specifically, in the case of VIIT, a positive sign is expected for efficiency-seeking FDI which tends to facilitate trade. Conversely, a negative sign on the FDI coefficient suggest that FDI may substitute for trade and is known as market-seeking FDI (Behrman, 1972).

4.2.5 Economies of scale (EoS)

Hypothesis (5): The larger economies of scale, the larger the share of HIIT whilst the direction of the share of VIIT is indeterminate. Scale economies represent an important determinant of IIT (Byun and Lee, 2005; Thorpe and Zhang, 2005; Veeramani, 2007; Faustino and Leitão, 2007). In the case of HIIT, the existence of EoS provides a motivation for multinational firms to spread fixed costs of knowledge capital across multiple plants and thereby reduce average costs as output expands. On the other hand, in the case of VIIT, motives are generated when there are different factor intensities combined with different factor endowments across countries. The

empirical IIT literature proposes a limited number of methods to measure EoS.¹³ There is no *a priori* for the impact of EoS on the share of VIIT, whereas the impact is expected to be positive for the share of HIIT.

4.2.6 Automotive assistance (AA)

Hypothesis (6): The predicted sign for automotive assistance and its impact on IIT patterns is indeterminate. Automotive assistance refers to any form of ‘assistance’ (tariffs, NTBs and fiscal measures, etc.) offered to MNCs to embark on vertical and horizontal FDI. Trade and industrial policy applied to automobile industries for the most part include a set of protective measures such as; import tariffs, NTBs¹⁴, including various fiscal incentives that potentially offset import tariffs payable (Ando, 2006). Kimura *et al.* (2007), argues that duty drawbacks (rebateable credits) assist in reducing the impact of trade barriers which increase IIT. Even though such protection measures may reduce nominal tariffs, it actually increases effective protection to the industry (Flatters, 2005), insulating inefficient domestic producers from international competition and subsequently lowering IIT.

The argument in favour of government fiscal assistance (for e.g. export and production subsidies) to selective industries such as the automobile industry is attributable to the attractiveness of MNC foreign investment inflows, employment benefits, technology spillovers and export opportunities, especially given the limited size of domestic markets (Kumar and Gallagher, 2007). It can be argued that by lowering incentives, some firms will be forced to leave (inefficient) thus reducing the number of firms or plants (increasing EoS and specialisation), resulting in higher output and trade contributing to rising IIT levels.

This study attempts to investigate the influence of AA as proposed by Gruen (1999), from the perspective of the effects of protection and government support on IIT in the South African automobile industry. This study adopts a measure of the bilateral average of number of paid industry workers between trading partners. The use of auto industry employment data to compute a proxy for AA is reasonable as Kumar and Gallagher (2007) cites various examples of

¹³ Value added per establishment (Sharma, 2004); Gross output per establishment (Byun and Lee, 2005); Average size (output value) of largest firms accounting for approximately one-half of industry output divided by total industry output (Veeramani, 2007), among others.

¹⁴ Examples of NTBs include QRs, administered protective measures such as local content requirements, countervailing duties, anti-dumping measures, differential rules of origin, etc.

jobs provided by MNC auto firms attributable to government financial assistance¹⁵. A positive sign indicates that greater AA serves to stimulate all IIT types. Conversely, a negative sign reveal that lower AA is expected to have a positive influence on IIT patterns. Thus, the predicted sign for AA is indeterminate.

4.2.7 Tariffs (TAR)

Hypothesis (7): The lower the level of tariffs, the greater the shares of VIIT, HIIT and TIIT. Typically, a negative relationship between trade barriers and the share of IIT is predicted (Sharma, 2004). Most studies use the level of tariffs as a proxy for trade barriers, despite other forms of trade barriers and find that a reduction increased IIT levels (Sharma, 2004; Zhang, *et. al.*, 2005; Veeramani, 2007). On the other hand, a positive relationship between trade barriers and IIT is revealed (Kind and Hathcote, 2004; Al-Mawali, 2005).

4.2.8 Exchange rate (EXR)

Hypothesis (8): There is no a priori for the impact of the exchange rate on the shares of VIIT, HIIT and TIIT. The impact of the exchange rate on IIT patterns is not clearly determined by IIT theory. Nevertheless, depreciation (appreciation) of the exchange rate is expected to stimulate exports (imports) and thus influence all IIT patterns. There is no *a priori* for the exchange rate impact on IIT patterns.

4.2.9 Product differentiation (PD)

Hypothesis (9): The greater the degree of product differentiation, the larger the share of VIIT and the lower the share of HIIT. According to empirical studies of IIT, the degree of PD is an important determinant of IIT. This study use the modified Hufbauer (1970) index initially developed by Balassa and Bawens (1987) and modified by Fontagné *et al.* (1997)¹⁶ to assess the impact of the degree of PD on IIT patterns in the South African automobile industry. According to Fontagné *et al.* (1997), the index provides an average unit value dispersion of

¹⁵ For example, in Alabama (USA), US\$ 300 million was given to Mercedes-Benz for the creation 1,500 jobs (subsidy per job = US\$ 200 thousand). Also, in Setubal (Portugal), US\$ 484 million was given to Ford, creating 1,900 jobs (subsidy per job = US\$ 254 thousand) (Kumar and Gallagher, 2007).

¹⁶

$$PD_{ij,kt} = \sum_{i \in j} \left[\frac{XV_{it}}{\sum_{i \in j} XV_{it}} \times \frac{\max(UV_{ij,kt}^X, UV_{i,t}^X)}{\min(UV_{ij,kt}^X, UV_{i,t}^X)} \right]$$

where $PD_{ij,kt}$ =degree of product differentiation, XV_i =export value of host country, UV^X =unit value of exports and $UV_{i,t}$ =average unit value of XV to all trading partners. The computed degree of PD measure is equal to or exceeds 1, where values close to 1 indicate low (high) degrees of vertical (horizontal) PD and values further away from 1 is conversant with higher (low) degrees of vertical (horizontal) PD.

export unit values for a given product k aggregated over the sum of all products within a given industry and is a measure of vertical PD. The PD variable is expected to be positively related to VIIT, negatively related to HIIT and ambiguous for TIIT in the automobile industry. The gravity model is estimated in the form of Equation (4) and is given as:

$$IIT(z)_{ijt} = \alpha_0 + \alpha_1 RDGDP_{ijt} + \alpha_2 WDIST_{ijt} + \alpha_3 TO_{ijt} + \alpha_4 FDI_{ijt} + \alpha_5 EoS_{ijt} + \alpha_6 AA_{ijt} + \alpha_7 TAR_{ijt} + \alpha_8 EXR_{ijt} + \alpha_9 PD_{ijt} + \varepsilon_{ijt} \quad (7)$$

The expected signs for the VIIT regression equation are:

$$\alpha_1 > 0, \alpha_2 < 0, \alpha_3 > 0, \alpha_4 > 0, 0 < \alpha_5 < 0, 0 < \alpha_6 < 0, \alpha_7 < 0, 0 < \alpha_8 < 0, \alpha_9 > 0$$

The expected signs for the HIIT regression equation are:

$$\alpha_1 < 0, \alpha_2 < 0, \alpha_3 > 0, \alpha_4 < 0, \alpha_5 > 0, 0 < \alpha_6 < 0, \alpha_7 < 0, 0 < \alpha_8 < 0, \alpha_9 < 0$$

Finally, the expected signs for TIIT will depend on the strength of the impacts of VIIT and HIIT.

4.3 Data and description

Data sources of the variables used in the econometric investigation are summarised in Table 7 in the Appendix. A final sample of 13 selected countries is used in this thus accounting for around 76 per cent of South Africa's total automotive trade¹⁷. The bilateral average and difference of total vehicle production (units) between trading partners is computed as proxies for EoS. The limitation of this proxy for EoS as a determinant of IIT is that it applies largely to industry level instead of firm or plant level

Panel unit root tests of the variables were conducted using at least three unit roots tests to investigate the univariate characteristics of all series in the panel. The three tests employed in the study include the Augmented Dickey Fuller (ADF)-Fischer and Philips Perron-Fischer tests (Madala and Wu, 2001) and the Levin, Lin and Chu (LLC) (Choi, 2002) test. The panel unit root tests reject the null of a unit root and conclude that the panel is stationary.

5. Econometric estimation results

The econometric estimations of the pooled, fixed effects and random effects models of VIIT, HIIT and TIIT were conducted and the results are reported in Table 2 and Table 4 and 6 in the Appendix. It is expected that the fixed effects model is the most appropriate model for investigating the determinants of bilateral IIT for several reasons. First, according to Baltagi

¹⁷ The final sample of countries is determined by the intensity of bilateral IIT and available data used as proxies for explanatory variables, especially in respect of industry-specific variables which were inadequate for several countries.

(2005), random effects are inappropriate specifications if the number of cross-sections (N) are small as is the case with this study ($N=13$). Second, the selection of the fixed effects model for this study is supported by Egger (2000) that argues in favour of fixed effects estimates of gravity models when estimating trade flows between predetermined countries. Table 2 presents the estimations results according to the fixed effects model specification.

Table 2 Fixed effects estimation results for VIIT, HIIT and TIIT

Explanatory variables	Dependent variables		
	VIIT	HIIT	TIIT
Constant	4.0742 (7.5037)***	0.2772 (0.8472)	4.2710 (11.2468)***
$RDGDP_{ijt}$	0.2874 (2.9457)***	-0.2170 (-2.5098)***	0.2203 (3.0603)***
$WDIST_{ij}$	-0.1349 (-3.3463)***	0.03359 (1.1831)	-0.1904 (-12.007)***
TO_{ijt}	0.4736 (5.7751)***	0.0558 (2.0592)**	0.4113 (5.1597)***
FDI_{ijt}	0.0239 (4.9152)***	-0.0244 (-2.8123)***	0.0206 (6.9599)***
EoS_{ijt}	-0.0227 (-2.0764)**	-0.0331 (-1.6201)	-0.0225 (-2.2016)**
AA_{ijt}	-0.4429 (-6.5149)***	(-0.0458) (-1.7469)*	-0.4784 (-7.6383)***
TAR_{ijt}	0.2199 (1.92527)**	<i>n/a</i>	0.0699 (0.5668)
EXR_{ijt}	<i>n/a</i>	0.0527 (2.4269)***	<i>n/a</i>
Adjusted R ²	0.69	0.32	0.74
F test	18.28***	4.04***	5.75***
Hausman test	112.31***	55.94***	129.69***

Notes: White cross-section t-values are given in parenthesis.

n/a indicates that the variable has been dropped.

Asterisks indicate (1%)***, (5%)** and (10%)* levels of statistical significance.

All three regression models for bilateral shares of VIIT, HIIT and TIIT appear to be well explained, since the Adjusted R^2 is equal to 0.69, 0.32 and 0.74, respectively¹⁸. According to the computed Hausman test (Verbeek, 2008), the correctness of fixed effects model is verified. The computed Hausman test statistics for the various models are $\chi^2(7)_{stat} = 112.31, 55.94$ and $129.69 > \chi^2(7)_{crit}=18.48$ at the 1 per cent significance level, respectively. Thus, the Hausman test confirms that the fixed effects model is preferred for empirically investigating the determinants of VIIT, HIIT and TIIT in South Africa's automobile industry.

Additionally, according to the fixed effects model, the country-specific effects imply the existence of unobservable features unique to each country that may hamper or strengthen bilateral IIT between South Africa trading partners. The results of the country specific coefficients (α 's) are presented in Table 5 in the Appendix. Negative signs for over half of the countries included in the sample of this study are suggestive that there are specific factors relevant to Australia, Brazil, France, Sweden, Spain, Italy, Turkey and India that may have not been captured in the estimated gravity model that reduce bilateral VIIT and TIIT with South Africa in the automobile industry. The opposite argument is applicable for positive signs of country specific coefficients (α 's).

6. Discussion of the econometric results

The empirical results are largely in accordance with theoretical models of VIIT and HIIT patterns. As expected, the RDGDP is positive and statistically significant at the 1 per cent level for VIIT and negative and statistically significant at the 1 per cent level for HIIT *a priori*. This result implies that as countries differ in relative economic size and potentially differ in relative factor endowments and technologies, the larger the share of VIIT as the potential gains from trade in quality products are greater. On the other hand, the potential gains from trading variety products are reduced when relative difference in economic size is large. This result confirms the H-O type theories for VIIT including the explanation of fragmentation theory of international production. Furthermore, the econometric results of the HIIT regression conform to Helpman and Krugman's (1985) theoretical model of HIIT whereby countries of similar sizes, factor endowments and technologies trade products that are differentiated by variety. In the case of HIIT for intermediate products the results are largely in line with Ethier's model (1982).

¹⁸ The Adjusted R^2 are explained in the context of variances of the *shares* of IIT patterns and not the *values* of IIT patterns thus indicating that the Adjusted R^2 are high and exhibits very good explanatory power of the models of IIT patterns.

The empirical findings also show that WDIST deters VIIT and TIIT and no has no significant impact on HIIT. The sign on the coefficient of WDIST for VIIT and TIIT possess the correct negative signs and are highly statistically significant at the 1 per cent level but are not statistically different from zero for HIIT. Moreover, the influence of distance on bilateral TIIT has implications for fragmentation and international production processes (Jones and Kierzkowski, 2001, 2005) in which service links costs are essential for enhancing vertical trade (Kimaru *et al.* 2007). Therefore there is a need for further economic development and greater investments and advancements in infrastructural projects relating to ICT and transport (rail, road and freight) technologies in an attempt to effectively lessen barriers of trade for VIIT and international production processes. This will contribute to reducing distances effectively between countries and regions thus stimulating IIT in the automobile industry.

As indicated earlier, the study experimented with the time-invariant DIST variable in the panel estimation. A second stage regression was conducted as recommended by Martinez-Zarzoso and Nowak-Lehman (2001). In this second stage regression model¹⁹, individual effects are regressed on DIST as well as regional dummies, namely North American Free Trade Agreement (NAFTA) and EU. The results indicate that the coefficient on DIST had the unexpected positive statistically significant sign for all IIT types. In the end, the WDIST variable was chosen over the time-invariant DIST variable in the final econometric estimations. Nevertheless, few authors demonstrate a positive but insignificant sign on the distance coefficient (Kind and Hathcote, 2004 and Zhang and Li, 2006) when investigating VIIT and HIIT patterns indicating that DIST is not important in facilitating IIT. This argument is based on good communication technologies and infrastructure that makes communication across geographical boundaries effective.

Now, turning to the impact of regional integration on IIT patterns in the automobile industry, the coefficient on NAFTA reveal a positive and significant impact at the 1 per cent level of significance for VIIT, HIIT and TIIT. This finding is line with the fact the Africa Growth Opportunity Agreement (AGOA) established in 2000 with the USA may have resulted in trade creating effects for the automobile industry thereby causing rising IIT levels between South

¹⁹ $IE_{ij} = \alpha_0 + \alpha_1 DIST_{ij} + \alpha_2 NAFTA + \alpha_3 EU + \mu_i$ where IE is individual effect, DIST is distance, NAFTA and EU are dummy variables taking the value of 1 when the country is part of or a member of NAFTA or EU, respectively and otherwise zero.

Africa and the USA. In addition, this finding may provide a case for establishing a Free Trade Agreement (FTA) with the USA. Moreover, VIIT and TIIT do not appear to be influenced by the countries of the EU revealing a positive but insignificant impact on VIIT and TIIT. On the other hand, HIIT is highly positively correlated to increasing integration efforts with EU trading partners in the automobile industry. This is not surprising as IIT between South Africa and EU countries such as Germany and France are largely explained by HIIT. Further investigation into potential trade diverting effects between South Africa and EU countries for VIIT should be explored.

The sign on the TO coefficient has the correct positive signs as expected for all IIT patterns and is statistically significant at the 1 per cent level for VIIT and TIIT and at the 5 per cent level for HIIT²⁰. Thus, the degree of trade openness is important for VIIT, HIIT and TIIT in South Africa's automobile industry. This study supports findings by Clarke (2005); Byun and Lee (2005); Thorpe and Zhang (2005); Zhang and Li (2006) that found TO positively influenced IIT. Thus, the study supports further trade liberalisation efforts by the government to encourage IIT levels in the automobile industry.

The results reveal that the FDI coefficient is positive and statistically significant at the 1 per cent level for VIIT and TIIT, while it is not statistically different from zero for HIIT²¹. This FDI variable is proxied by the absolute difference in inward FDI stocks between South Africa and trading partners; indicating that a positive sign on the FDI coefficient reflect large differences in inward FDI between partners is expected to promote VIIT and TIIT. Thus, greater inward FDI for South Africa, *ceterus paribus* tends to complement trade and consequently encourage VIIT. This finding supports arguments by several authors that reveal FDI strategies and motives of MNCs driven by efficiency-seeking FDI increase VIIT (Aturupane *et al.* 1999; Fukao *et al.* 2003, Zhang *et al.* 2005). However, in the case of the HIIT regression, FDI is proxied by actual inward FDI stock values. The coefficient on this FDI variable becomes significant at the 1 per cent level and posses a negative sign indicating this variable negatively influence HIIT by displacing trade.

²⁰ The trade openness (TO) variable is a country-specific variable used to capture the impact of trade openness whereas the tariff (TAR) variable is an industry-specific variable capturing effects of industry trade policy. The inclusions of both variables are justified in the models for two reasons. First, there is no evidence of perfect multicollinearity and dropping any one of the variables reduces the overall fit of the models estimated causing insignificance of some of the several explanatory variables. Second, the consensus regarding the harmfulness of the degree of multicollinearity to the estimates in the literature is ambiguous.

²¹ In the VIIT and TIIT regression models, the coefficients and t-statistics for the difference in inward FDI stocks are reported, while for the HIIT regression the coefficients and t-statistics for the actual inward FDI stocks are reported (see Table 6.2).

This implies that FDI influence VIIT and HIIT in different manners. Similar findings of such market-seeking FDI motives by MNCs as a determinant of IIT patterns have been reported by several authors; Byun and Lee (2005); Zhang *et al.* (2005); Veeramani (2007) and Chang (2009). Thus, the results of this study suggest that intensive FDI activities by MNCs act as a substitute for trade thereby reducing HIIT and as a result may potentially lead to agglomeration effects. This is not surprising as high trade barriers provide incentives for multinational firms to engage in market-seeking FDI activities.

Next, the sign for EoS variable is negative and statistically significant at the 5 per cent level of significance for both VIIT and TIIT. The EoS variable is proxied as the absolute difference in total average vehicle production (units) between South Africa and bilateral trading partners²². Thus, the negative sign on the EoS coefficient imply large EoS is negatively correlated to VIIT and TIIT. Similar findings of negative statistically significant signs on the EoS have been reported by several authors (Faustino and Leitão, 2007 and Thorpe and Zhang and Byun and Lee, 2005). They interpret the negative coefficient confirming the paradigm of a large number of firms and competitive structure of the industry (The implication of the results is in favour of reducing the number of firms (consolidation) in the industry and increasing production volumes accompanied by lower unit costs and thus the achievement of greater EoS that could subsequently encourage VIIT. In addition, a negative sign on the EoS coefficient in the context of fragmentation theory and outsourcing reveal that the existence of EoS deters domestic firms from outsourcing activities and thus reducing trade (Thorpe and Zhang, 2005).

Next, for the HIIT model, the EoS variable is proxied by the bilateral average of total average vehicle production (units) between South Africa and trading partners. The EoS coefficient is negative and not significantly different from zero indicating that EoS is not important in explaining HIIT in South Africa's automobile industry. Analogous findings of non-significance of EoS in explaining HIIT have been reported by Sharma (2004); Clarke (2005); Türkan (2005); Faustino and Leitão (2007).

The coefficient of the automotive assistance (AA) variable is negative and statistically significant at the 1 per cent for VIIT and TIIT and 10 per cent level of significance for HIIT. Thus, lower automotive assistance is expected to positively influence IIT patterns in the automobile industry. The results imply that by reducing government assistance to those inefficient firms will forced

²² The measure of economies of scale is applicable to the industry (external EoS) and may not necessarily be appropriate as a measure of firm-level (or internal) EoS.

them to leave the industry thus reduce the number of firms and plants (potentially increasing EoS and specialisation activities) thereby resulting in larger output and trade outcomes contributing to rising IIT. On the demand side, consumers are expected to benefit from lower prices and greater differentiated automotive products. This result implies the existence of potential labour adjustment costs in the short run but as the industry becomes more competitive and efficient trade opportunities are likely to be created in the medium-longer term. This finding is in accordance with the WTO Agreement on Subsidies and Countervailing Measures (SCM) to be phased out.

Several studies reveal that trade barriers such as TAR impact negatively on IIT (Sharma, 2004; Veeramani, 2007). However, the TAR coefficient in this study is positive and statistically significant at the 5 per cent level of significant suggesting that protection such as tariffs positively influence VIIT²³. This result corroborates findings by Al-Mawali (2005) and Kind and Hathcote (2004) whereby positive signs on this coefficient were indicative of trade barriers positively influencing IIT because protection stimulates multinational activities and encourage the intensity of IIT. Although, the TAR coefficient possessed a highly negative statistically significant sign for the HIIT model, the inclusion of the TAR variable rendered several other regressors insignificant and imposed misspecification problems for the model. This could have happened as a result of very low and sometimes zero observations for HIIT between South Africa and several partners, such as Japan. The TAR variable was subsequently dropped from the HIIT regression model.

Several proxies for the EXR were considered in the regression models to capture the exchange rate impact on bilateral IIT levels in South Africa's automobile industry²⁴. In the VIIT model, the coefficient on the EXR variable revealed the correct statistically significant sign but its inclusion caused insignificance of several explanatory variables in the VIIT model and was subsequently dropped from the regression. On the other hand, for the HIIT model, the bilateral SA rand-US dollar exchange rate variable acquires a positive sign at the 1 per cent level of significance and

²³ Also, the study experimented with interactions between TAR and AA (TAR×AA) in an attempt to capture the trade policy impact on IIT patterns in the automobile industry. The findings indicate a positive but insignificant impact on VIIT and TIIT but a negative and statistically significant impact on HIIT. The interaction of (TAR×AA) reduces the Adjusted R² to 0.32, 0.63 and 0.66 for HIIT, VIIT and IIT models, respectively. This result indicates that protection policies serve to deteriorate HIIT levels in the automobile industry.

²⁴ These include the nominal and real effective exchange rate indices, the bilateral SA rand-US\$ exchange rate and the SA rand-US\$ exchange rate index.

improves the overall fit of the regression model²⁵. This finding reveals that exchange depreciation positively influences exports and consequently encourages HIIT between trading partners in the automobile industry.

As greater differentiation of quality products in the automobile industry stimulates VIIT, whilst non-standardisation of product variety stimulates HIIT a positive sign for VIIT and a negative sign for HIIT on the PD coefficient is expected. The inclusion of the product differentiation (PD) variable was found to possess the correct signs for VIIT and HIIT, although insignificant. In the end, the PD variable was dropped from the final estimation.

7. Concluding remarks

This study sets out to empirically investigate country- and industry-specific factors of bilateral IIT patterns in South Africa's automobile industry. These factors provide crucial information from a macro perspective to managers in the automobile industry. Industry managers need to align their operations accordingly, especially as government intends to make changes to existing policies in this industry. The empirical results reveal that relative difference in economic size, trade openness; FDI and tariffs stimulate VIIT, whilst distance, economies of scale and automotive assistance negatively affect it. On the other hand, relative difference in economic size, FDI, and automotive assistance negatively affects HIIT whereas trade openness and depreciation of the exchange rate positively influences it. Moreover, the findings assert that FDI strategies and motives of multinational firms in the automobile industry for HIIT are market-seeking and efficiency-seeking for VIIT. The study also illustrates that the regression model for HIIT exhibited weaker explanatory power compared to the VIIT model. This is not surprising because IIT in the South African automobile industry is largely dominated by VIIT.

The results of this study provide several implications for increasing IIT levels in the South African automobile industry. The proposal for consolidation in the domestic industry is warranted, as such a development could contribute to efficient production and the achievement of greater EoS in production and the profitability of industry stakeholders in the long run that could outweigh some of the short-term adjustment costs (e.g. reduction in labour) that are likely to be associated with firms exiting the industry. Increasing the share of IIT levels in total trade is

²⁵ The coefficient on the nominal effective exchange rate in the HIIT also yielded the correct sign and was statistically significant. However, the use of the bilateral exchange rate variable resulted in the overall better performance of the HIIT model.

associated with lower adjustment costs compared to increasing the share of inter-industry trade in total trade.

Trade barriers, including tariffs and automotive assistance as part of automotive policy should be reduced and geared to more unbiased competitive practices that can contribute to increased domestic manufacturing output and stimulate IIT. In the domestic automobile industry, under the new government programme (APDP) that is expected to be implemented in 2013, tariffs are expected to remain fixed at 25 per cent and 20 per cent for completely-built-up units and completely knocked-down sets respectively from 2013 until 2020. Thus, the study offers support for reducing tariffs applied to the automobile industry aligned with main trading partners. Under the new APDP, the import-export complementation scheme (export subsidy) is expected to be terminated whilst the introduction of production subsidies are expected to be introduced. This indicates that the government's policy is somewhat geared to the correct policy direction as production subsidies are known to be less distorting compared to export subsidies. Another concern is that the government's automotive policy incentives are largely biased against component manufacturers while largely benefiting original equipment manufacturers (OEMs). These incentives should be redesigned as more neutral between OEMs and component manufacturers, especially in areas that can contribute to increasing manufacturing capacity.

In conclusion, the findings of the study recommend that greater investments should be directed to the development and upgrade of ICT and infrastructure in order to improve the trade costs associated with geographical distance and the service links and connections necessary for increasing VIIT and fragmentation and international production processes. Finally, the study proposes advancing trade liberalisation and deregulation of the South African automobile industry so as to attract greater efficiency-seeking FDI and consequently enhance IIT levels in the automobile industry.

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Table 3. Summary of classification of trade patterns

Trade Pattern	Formula of index/ degree of trade overlap	Description
Two-way trade or intra-industry trade (IIT)	$GL_{ij,kt} = \frac{(X_{ij,kt} + M_{ij,kt}) - X_{ij,kt} - M_{ij,kt} }{(X_{ij,kt} + M_{ij,kt})}$	Index lies between 0 and 1, equal to share of IIT in total trade.
One-way trade (OWT) or inter-industry trade	$FF_{ij,kt} = \frac{Min(X_{ij,kt}, M_{ij,kt})}{Max(X_{ij,kt}, M_{ij,kt})} \geq 10\%$	No significant overlap ≤ 10 per cent reflects OWT.
Horizontal intra-industry trade (HIIT)	$1 - \alpha \leq \frac{UV_{ij,kt}^X}{UV_{ij,kt}^M} \leq 1 + \alpha$	Overlap/IIT with small unit value differential where $\alpha=0.25$ (0.15; 0.35)
Vertical intra-industry trade (VIIT)	$\frac{UV_{ij,kt}^X}{UV_{ij,kt}^M} < 1 - \alpha \text{ or } \frac{UV_{ij,kt}^X}{UV_{ij,kt}^M} > 1 + \alpha$	Overlap/IIT with large value unit value differentials where $\alpha=0.25$ (0.15; 0.35)

Table 4. Pooled estimation results of VIIT, HIIT and TIIT

Explanatory variables	Dependent variables		
	VIIT	HIIT	TIIT
Constant	0.1979 (1.3990)	-0.4978 (-0.7743)	0.2508 (1.7335)*
$RDGDP_{ijt}$	0.2859 (3.6954)***	-0.0278 (-0.2933)	0.2279 (2.6995)***
$WDIST_{ij}$	-0.0315 (-1.4218)	0.0139 (0.4811)	0.0028 (0.1302)
TO_{ijt}	-0.0333 (-2.2654)**	-0.0295 (-1.3452)	-0.0303 (-1.4376)
FDI_{ijt}	0.0274 (4.0674)***	0.0248 (3.1867)***	0.0219 (4.3786)**
EoS_{ijt}	-0.0002 (-0.0375)	0.0238 (1.8882)**	0.0309 (1.7667)*

AA_{ijt}	0.0069 (0.5805)	-0.0034 (-0.1828)	-0.0427 (-2.2809)**
TAR_{ijt}	-0.0833 (-2.9648)***	<i>n/a</i>	-0.0589 (-1.6710)*
EXR_{ijt}	<i>n/a</i>	0.0029 (0.0477)	<i>n/a</i>
Adjusted R ²	0.44	0.09	0.48

Notes: White cross-section t-values are given in parenthesis. *n/a* denotes variables dropped. Asterisks indicate (1%)***, (5%)** and (10%)* levels of statistical significance.

Table 5. Country-fixed effects of VIIT, HIIT and TIIT

Country	VIIT	HIIT	TIIT
	Dependent variables		
α Australia	-0.4637	-0.1267	-0.6206
α Brazil	-0.0687	0.0266 [#]	-0.0713
α China	0.2534 [#]	0.0268 [#]	0.4433 [#]
α France	-0.1191	0.0791 [#]	-0.0751
α Germany	0.3197 [#]	0.0770 [#]	0.4127 [#]
α India	-0.4057	-0.0930	-0.3595
α Italy	-0.2874	-0.0379	-0.3322
α Japan	1.0648 [#]	0.0483 [#]	1.0511 [#]
α Spain	-0.2941	0.0275 [#]	-0.3224
α Sweden	-0.7509	-0.1727	-0.9252
α Turkey	-0.4413	-0.1296	-0.6222
α United Kingdom	0.1035 [#]	0.0408 [#]	0.1100 [#]
α United States	1.0896 [#]	0.2336 [#]	1.3115 [#]

Notes: # indicates a positive sign.

Table 6. Random effects estimation results of VIIT, HIIT and TIIT

Explanatory variables	Dependent variables
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	VIIT	HIIT	TIIT
Constant	0.8470 (1.8328)*	-0.4651 (-0.6822)	0.5731 (1.3315)
$RDGDP_{ijt}$	0.4733 (3.3995)***	-0.0285 (-0.2733)	0.3989 (2.6413)***
$WDIST_{ij}$	-0.0949 (-2.4971)***	0.0151 (0.4749)	-0.0527 (-1.2470)
TO_{ijt}	0.0425 (0.4232)	-0.0303 (-1.2760)	0.0063 (0.0832)
FDI_{ijt}	0.0315 (1.8005)*	0.0244 (2.8716)***	0.0260 (1.4038)
EoS_{ijt}	0.0085 (0.6795)	0.0210 (1.6803)*	0.0060 (0.4380)
AA_{ijt}	-0.0213 (-0.3039)	-0.0020 (-0.1014)	-0.0238 (-0.5335)
TAR_{ijt}	-0.0588 (-0.4377)	<i>n/a</i>	-0.0819 (-0.6679)
EXR_{ijt}	<i>n/a</i>	0.0020 (0.0326)	<i>n/a</i>
Adjusted R ²	0.02	0.06	0.02

Notes: White cross-section t-values are given in parenthesis. *n/a* denotes variables dropped.

Asterisks indicate (1%)***, (5%)** and (10%)* levels of statistical significance Random country effects are not reported.

Table 7. List of variables used in the econometric analysis

Variable	Description	Data source
Trade data	HS 6-digit product level data for automotive and related codes were used to compute TIIT, VIIT and HIIT indices.	Quantec database
RDGDP	Computed index (Balassa and Bauwens, 1988).	WDI
WDIST	Great circle distance between country <i>i</i> and <i>j</i> , where the weight	Mayer and

	is the ratio of GDP of country j to the sum of total GDPs of all its trading partners.	Zignago (2006)
DIST	Great circle distance between capital cities of trading partners i and j .	Mayer and Zignago (2006)
REG	Dummy variable equal to 1 if countries i and j have trading arrangements, else 0 (EU and NAFTA).	Dummy variable
TAR	Average MFN applied automotive tariff rates HS 6-digit level (average of H87...) between i and j .	WTO
AA	Automotive assistance is proxied by the bilateral average of number of paid employed workers in industry ^a between i and j .	LABOSTA
FDI	Average and absolute difference of inward FDI stocks ^b (million US\$) as a percentage of gross fixed capital formation (GFCF).	UNCTAD, FDI Stat
EXR	Bilateral South African rand-US dollar exchange rate	IMF
EoS	Average and absolute difference of total vehicle production (units) between i and j .	OICA
PD	Product differentiation (PD) as computed by the revised Hufbauer index.	Fontagné <i>et al.</i> (1997)
TO	Trade openness is computed as the residuals from a regression of per capita trade on per capita income and population.	Stone and Lee (1995)

Notes: ^aValues for China and India are obtained from www.chinaonline.com and www.indiastat.online, respectively.

^bFDI stocks is the value of the share of their capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprise

THE EVALUATION OF A WORK-RELATED WELL-BEING INTERVENTION

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ABSTRACT

Human resource development is critical to ensure wealth creation in South Africa (Mlambo-Ngcuka, 2006). The current socio-political problems and high crime rate in South Africa warrants unique contributions from South African Police Service (SAPS) members. Forensic specialists are especially exposed to high job demands and a lack of resources, adding to their distress (burnout). It is therefore important to assist these officials by means of skills development. The objective of this study was to evaluate a work-related well-being intervention implemented to address the levels of well-being of Forensic specialists of the SAPS. By means of a longitudinal survey design, an integrated intervention addressing well-being was presented to these members over a one-year period. The post-intervention results indicated that the

members portrayed a high risk to ill health, tended to obtain a low sense of significance from their work and showed a high risk for low affective commitment.

INTRODUCTION

The reality of skills shortages, poverty and unemployment is impediment in South Africa (Durst, 2007). The Accelerated and Shared Growth Initiative for South Africa (ASGISA) that was established during 2006 has as its core objective to halve poverty and unemployment in South Africa by 2014. ASGISA emphasises that to reach the objective in 2014 more focus needs to be placed on human resource training (Mlambo-Ngcuka, 2006). President Thabo Mbeki stated in the preface of South Africa's National Research and Development Strategy, that human resource development is critical to ensure wealth creation in the context of globalisation in South Africa (South Africa, 2002). The importance of skills development was further emphasised by Mr. Zuma when he raised a call to parastatals to play a bigger role in training people and providing skills (Stolley, 2008).

Municipalities and government departments however often provide poor service delivery in contrast with the Batho Pele principle that emphasis service delivery in the public sector. The lack of courtesy and sympathy of many public officials would appear to inhibit the quality interaction of citizens and require guidelines to achieve enhanced service delivery. The "we care" belief set of the Batho Pele emphasizes the importance of a people-centric and people driven approach. This approach can only be successful though, if employees are healthy, motivated and satisfied. Diener, Lucas and Oishi (2002) found that employee health and wellness contribute to the performance of employees and that a country as a whole could benefit due to economic growth. The objective of ASGISA for 2014 can ultimately only be reached if employees are healthy and well.

PROBLEM INVESTIGATED

Work-related health and well-being, including occupational stress, is a major area of research in government departments worldwide. Addressing stress in the workplace, counting the potential cost to individuals and organisations, are especially focussed on (Anshel, 2000; Le Fevre, Kolt and Matheny, 2006; Violanti, 1997). This is also true for the South African context and especially the South African Police Service (SAPS), where thousands of rand are lost in absenteeism, reduced productivity and workers' compensation benefits due to ill health.

Furthermore, thousands of police members are leaving the service, citing stress and fatigue as the main reasons (Hosken, 2002; Seepe, 2001).

Stress has an adverse effect on police members, who often take their own lives (Hosken, 2002). Studies have indicated the damaging effects stress has on an individual's physical and psychological health (Anshel, Robertson and Caputi, 1997; Duckworth, 1986; Eden, 1990). It is evident from previous studies that SAPS members experience excessive stress and portray symptoms of burnout (Pienaar and Rothmann, 2003). Police officials have to cope with many job demands, limited resources and often a lack of control over these stressors. It is therefore important to research ways of addressing these stressors in order to assist SAPS managers to address the distress members might be experiencing by providing guidelines to these members to achieve enhanced service delivery as stated by the Batho Pele principle.

Burnout and work engagement are specific focus areas for research and intervention (Maslach, Schaufeli and Leiter, 2001). Kompier and Cooper (1999) identified three levels of intervention strategies to deal with work-related well-being (including stress, burnout and work engagement), namely primary, secondary and tertiary strategies. It seems that primary interventions are less often implemented than secondary and tertiary interventions. Therefore, more research is needed to address the broad area of stress management interventions (Le Fevre et al., 2006). For interventions to make a real contribution, both individual and organisational participation are important (Dewe and O'Driscoll, 2001; De Frank and Cooper, 1987; Le Fevre et al., 2006). Kompier and Cooper (1999) found that stress intervention practices often act on reducing the effect of stress on individuals and fail to reduce the actual workplace stressors.

RESEARCH OBJECTIVES

The objective of this study was to evaluate the effectiveness of an intervention programme directed at the promotion of work-related well-being in the SAPS. A multi-dimensional approach combining organisational and individual directed intervention strategies was developed to address well-being at the LCRC unit.

The specific objectives of this study are:

- To determine the level of risk for burnout, low work engagement, ill health and low organisational commitment for LCRC members.
- To investigate the aspects that should be included in an intervention programme directed at work-related well-being.

- To evaluate interventions used to promote work-related well-being of LCRC members.

LITERATURE REVIEW

The environment police officials are exposed to warrant that they have to cope with many demands, often with limited resources and a lack of control. Although these difficulties relate to police officials experiencing work-related trauma, more stressors seem to manifest on an organisational level, which, in turn, affects the psychological well-being of police officials (Storm and Rothmann, 2002). Although counselling is important following a critical incident, it is emerging that an appropriate supportive response from significant people close to the trauma victim, including management, may be even more important as a determinant of the recovery of staff (Van Wyk, 2003).

Bakker and Geurts (2004) point out that to avoid employees' exhaustion, job demands have to be reduced or redesigned by means of interventions. Increasing job resources may also contribute to members experiencing work-related flow (Bakker and Geurts, 2004). Since job demands play a central role in burnout, it is necessary to implement preventive organisationally based strategies to address high job demands. It is vital that the organisation should facilitate healthy employees and working conditions. The SAPS should design and implement planned interventions to follow a strategy with the ultimate aim of making the organisation inherently less stressful (Storm and Rothmann, 2002). Upon reviewing stress research, it became clear that a serious lack of intervention research exists. Dewe and O'Driscoll (2001) indicate that little is known about what actions organisations should take to address stress-related problems. Furthermore, not much information is available regarding how effective these actions are and what managers would do if they were responsible for stress management interventions in their organisation (Dewe and O'Driscoll, 2001; Kompier, 2003). Grobler (2006) states that the SAPS should look at the training of managers to sensitise them regarding issues like suicide, members with personal problems, financial problems and marital problems.

Work-related well-being interventions

A combination of individual and organisational participation is important for interventions to facilitate lasting change, (De Frank and Cooper, 1987; Dewe and O'Driscoll, 2001). Interventions can aim at three different levels, organisational, individual/organisational and individual level (Giga, Cooper, and Faragher, 2003). Stress management interventions will not be successful if organisational policies to sustain and develop employee health and well-being are not in place

(Giga et al., 2003). Kompier and Cooper (1999) identified three levels of interventions strategies to address workplace stressors, namely primary, secondary and tertiary interventions.

Primary level interventions are concerned with modifying or limiting the stressors in the workplace in order for the environment to better fit the individual (Kompier and Cooper, 1999). The limitation of job demands could play an important role in preventing health problems, while organisational-based strategies could address high job demands, for example, flexible work schedules and goal setting. For the purposes of this study, the following primary level interventions are relevant (Giga et al., 2003): a) career development to provide opportunities for employees to acquire new skills and to develop themselves (Roberts and Davenport, 2002). Recommending ways to management regarding ways in which members can advance in the organisation and can be assisted to manage their careers; b) sharing in organisational goals to enable employees to share in the success of the organisation and to be proud of the quality of work they do. Specific interventions include aspects such as, a rewarding work environment, characterised by a positive climate, employees having the decision-making authority to do their jobs well and recognition for contributions; c) selection and placement to ensure that individuals have the correct set of skills to deal with the demands of the tasks at hand; d) training and educational programmes to teach new methods and thereby reduce job strain (Bunce and West, 1996). Other aspects that are addressed on an organisational level include physical and environmental characteristics, and communication (Giga et al., 2003).

According to Dewe (1994), secondary level interventions aim at equipping the individual with strategies, skills and techniques to cope better with job demands. These interventions focus on the individual and are concerned with increasing awareness and extending the physical and psychological resources of employees to enable them to minimise the damaging effects of stress and manage stress more effectively. The following secondary level interventions are relevant for this study (see Giga et al., 2003): a) health education to provide information to members concerning improvements in vitality and mood; b) training and education programmes concerning skills development in areas such as stress prevention, time management, interpersonal skills and conflict management thereby assisting members in reducing some of the pressures. Trauma inoculation workshops will aim at equipping managers with specific skills in identifying and managing symptoms of trauma; And c) relaxation, meditation and biofeedback related to focus on breath and muscle calming, to reduce stress, anxiety and tension and to learn to respond to information relating to skin and muscle activity.

Tertiary level interventions focus mainly on individuals, with a recuperative (or curative) rather than preventative role. The main aim of tertiary level interventions is to rehabilitate employees who have suffered from the consequences of poor well-being at work by providing the necessary counselling (Dewe and O'Driscoll, 2001). There is well-documented evidence (Kompier and Cooper, 1999) to suggest that counselling is effective in improving the psychological well-being of employees and has considerable cost benefits in terms of reduced sickness absence. The following tertiary level interventions are relevant for the purposes of this study (Giga et al., 2003): a) support groups will provide a supportive environment and reduce role stressors and their negative effects on members. Members are encouraged to share experiences and create a collective approach to problem solving; b) counselling and therapy to focus on the rehabilitation of employees who have suffered the consequences of work stress; and c) trauma debriefing to focus on the rehabilitation of employees who have suffered the consequences of exposure to a traumatic incident.

Although the SAPS has introduced several initiatives to address stressors in the workplace (Seepe, 2001), questions are raised regarding the distribution of stress management services and police members' use of such services. No documented research is currently available regarding the effectiveness of interventions in the SAPS.

RESEARCH METHODOLOGY

Research design

A longitudinal survey design with only one group, namely the experimental group, was used. The same instruments were administered at two different times (with a one-year interval) to the same group of participants. The essential characteristic of the one-group design is that the group is compared to itself. Advantages of this research design include that actual changes and impacts experienced by participants can be assessed (Montgomery, Peeters, Schaufeli, and Den Ouden, 2003).

Participants

The participants were working units of the Local Criminal Record Centre (LCRC) of the SAPS North West. A total number of 71 members participated in the study. The sample was equally

distributed between male (50%) and female (49%), and the majority were Tswana-(39%) or Afrikaans (47%) speaking Inspectors (mainly Fingerprints Investigators (33%) or administration personnel (39%) with mostly 11-15 years of experience in the SAPS.

Intervention programme

The content and the methodology of the work-related well-being intervention programme are reported in Table 1.

TABLE 1
CONTENT AND METHODOLOGY OF A WORK-RELATED WELL-BEING INTERVENTION PROGRAMME

Phase	Intervention	Method	Time*
Primary	Addressing job demands and resources	Engaging management	3 hours
Primary	Role clarity	Growth group	4 hours
Primary	Trauma Management for managers	Growth group Lectures Role play	24 days
Secondary	Stress prevention and engagement	Growth group Lectures Role-play Relaxation techniques	8 hours
Secondary	Engagement (happiness and gratitude)	Growth group Lectures	4 hours
Secondary	Interpersonal skills, conflict management	Growth group and lectures	8 hours
	Managers: Interpersonal skills, conflict management	Lectures	8 hours
Secondary	Team enhancement and time management	Growth group Lectures	8 hours
Tertiary	Counselling sessions	EAP	Continuous

Tertiary	Multiple stressor debriefing	Trauma debriefing	6 sessions
Tertiary	Ill health and Support Groups	EAP	Continuous

*Time period per unit

The content and the methodology of the work-related well-being intervention programme included workshops and training sessions aiming at primary, secondary and tertiary level presented over a one-year period:

Primary level intervention. One session pertaining to role clarity was facilitated. During the presentation at a specific unit, it became clear that job schedules were set on a national level and could not be redesigned. Therefore, clarification regarding each employee's role at the unit was subsequently facilitated. Team development interventions were presented at each unit in order to enhance group functioning and effectiveness in the working groups. During group discussions, certain themes emanated, namely the availability of resources, job demands and job control. A document stipulating this information was compiled by the researcher for the attention of top management of the unit in an attempt to address these issues on a managerial level. Selection and placement procedures were evaluated.

Secondary level interventions. According to Murphy (1995), stress management intervention models should involve three critical phases, namely problem identification, intervention design and programme evaluation. With problem identification, the sources of the stress were identified (according to the model of work-related well-being that was used for the purposes of this study). An organisation-based stress-prevention and work engagement programme was developed during the second phase in order to assist members and managers with identifying their own stress symptoms and coping mechanisms. Each working group was exposed to two workshops in this regard. The first workshop focussed on trauma management and coping mechanisms and stress and trauma management skills (presented to the management of each unit). The second workshop focussed on stress symptoms and stressors and members were given the opportunity to identify their own stress symptoms. Managers were exposed to separate workshops to stimulate skill development. Finally, health in relation to happiness was discussed during a lecture with each unit. The programme evaluation phase entailed the post-test in order to determine the effectiveness of the stress management intervention programme.

Tertiary level interventions. Tertiary level interventions focussed on the referral and counselling of employees. Field notes were made after each basic counselling and support group session and involved impressions and themes that emerged from the sessions. Members with high stress levels were referred for counselling with the Employee Assistance Programme in the SAPS. Some members were also referred for medical intervention due to ill health and, subsequently, went on sick leave. During the year, LCRC members were exposed to 131 counselling sessions and 152 trauma debriefing sessions, and three members were referred for medical interventions and subsequently enrolled for the ill health reintegration training.

Measuring instruments

The following measuring instruments were used in this study:

A *biographical questionnaire* was used to gather demographic information on the participants.

The *Maslach Burnout Inventory – General Survey* (MBI-GS) (Maslach, Schaufeli, and Leiter, 1996) was used to measure burnout. Two subscales of the MBI-GS, namely Exhaustion (consisting of five items) and Cynicism (consisting of four items) were used for the purposes of this study. Schaufeli, Van Diederendonck, and Van Gorp (1996) reported that Cronbach coefficient alphas varied from 0,87 to 0,89 for Exhaustion, and 0,73 to 0,84 for Cynicism. The construct validity of the MBI-GS was supported by Storm and Rothmann (2003a) in a study conducted among members of the SAPS with alpha coefficients varying from 0,88 (Exhaustion) to 0,70 (Cynicism).

The *Utrecht Work Engagement Scale* (UWES) was used to measure participants' level of engagement. The UWES was developed by Schaufeli, Martinez, Pinto, Salanova, and Bakker (2002) as a measure of engagement. Two subscales of the UWES, namely Vigour (e.g. "I am bursting with energy in my work"), and Dedication (e.g. "My job inspires me") were used for the purposes of this study. The alpha coefficients for the three subscales varied between 0,68 and 0,91 (Schaufeli et al., 2002). Storm and Rothmann (2003b) obtained adequate alpha coefficients for the two subscales Vigour (0,78) and Dedication (0,89).

The *Job Demands-Resources Scale* (JD-RS) was used to measure the specific job characteristics. The dimensions of the JD-RS include pace and amount of work, mental load, emotional load, variety in work, opportunities to learn, independence in work, relationships with

colleagues, relationships with immediate supervisors, ambiguities about work, information, communication, participation, contact possibilities, uncertainty about the future, remuneration and career possibilities. Jackson and Rothmann (2005) found that seven factors of the JDRS were reliable according to their alpha coefficients. These factors included organisational support: 0, 88; growth opportunities: 0, 80; overload: 0, 75; job insecurity: 0, 90; relationship with superiors: 0, 76; control: 0, 71; and rewards: 0, 78. Rothmann, Mostert, and Strydom (2006) also found reliable alpha coefficients for the JDRS that varied between 0, 76 to 0, 92 in a South African sample.

The *Health Subscale of the ASSET* was used to assess respondents' level of health. The Health Scales consisted of 19 items arranged on two subscales, namely Physical Ill Health and Psychological Ill Health. All items on the Physical Ill Health subscale were related to physical symptoms of stress and were scored on a scale varying from 1 (*never*) to 4 (*often*). The items listed on the Psychological Ill Health subscale were symptoms of stress-induced mental ill health.

The *Organisational Commitment Subscale of the ASSET* was used to measure the individual's attitude to the organisation. The first subscale, namely Individual Commitment consisted of five items (e.g. "I am proud of this organisation"). The second subscale, namely Organisational Commitment consisted of four items (e.g. "I feel valued and trusted by the organisation").

Statistical analysis

The statistical analysis was carried out using SPSS (SPSS Inc., 2005). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. Paired-samples *t*-tests were used to determine the difference in results for year 1 and year 2.

RESULTS

The descriptive statistics and alpha coefficients of the scales of the measuring instruments are presented in Table 2.

TABLE 2

DESCRIPTIVE STATISTICS AND CRONBACH ALPHA COEFFICIENTS OF THE SCALES

Item	Year 1			Year 2		
	Mean	SD	α	Mean	SD	α
Exhaustion	12,18	8,13	0,84	13,23	7,39	0,80
Cynicism	9,08	5,30	0,62	10,01	4,76	0,54
Vigour	19,77	5,63	0,60	19,17	5,85	0,64
Dedication	22,99	6,16	0,78	22,38	6,52	0,80
Organisational Support	45,32	8,90	0,91	45,56	8,56	0,91
Growth Opportunities	25,94	5,77	0,84	25,18	5,56	0,82
Social Support	19,27	2,98	0,58	18,83	3,19	0,76
Advancement	11,38	3,67	0,78	11,81	3,74	0,76
Job Insecurity	8,03	2,97	0,88	7,97	2,81	0,84
Job Demands	25,11	5,37	0,80	25,45	4,72	0,76
Physical Ill Health	16,25	4,65	0,84	16,20	4,53	0,85
Psychological Ill Health	24,42	7,49	0,91	25,01	7,34	0,91
Affective Commitment	19,55	6,53	0,77	19,14	5,82	0,60
Normative Commitment	16,85	4,90	0,86	16,35	4,15	0,80

Table 2 shows Cronbach alpha coefficients varying from 0,54 to 0,91. These values compare reasonably well with the guideline of 0,70, except for Cynicism (year 1 and 2), Vigour (year 1 and 2), Social Support (year 1) and Affective Commitment (year 2), thereby confirming internal consistency of the scales (Nunnally and Bernstein, 1994).

The level of risk for burnout, low work engagement, ill health and low organisational commitment was calculated to guide the development of an intervention strategy for the LCRC members. The level of risk (or risk factor) associated with the likely negative effects of a given variable was calculated by weighing the sample mean (perceived level of a given variable) by the sample correlation (between a specific variable and its outcome). This gives an estimate of

the risk associated with exposure to a specific factor (Clarke and Cooper, 2000). The sample means were standardised to make it possible to assess the relative seriousness of each risk factor. Individual scores on the positive constructs (i.e. Vigour, Dedication, Affective Commitment, Normative Commitment, Organisational Support, Growth Opportunities, Social Support, and Advancement) were reversed to allow direct comparison of risk factors. (*Please note:* The absolute value of a specific risk factor is not interpretable. However, because sample means are based on standardised scores, the scores of the different risk factors can be compared to assess the relative importance of different risk factors.)

TABLE 3
RISK FACTORS FOR BURNOUT, DISENGAGEMENT, ILL HEALTH AND LOW COMMITMENT

	Year 1				Year 2			
	Physical Ill Health	Psychological Ill Health	Affective Commitment	Normative Commitment	Physical Ill Health	Psychological Ill Health	Affective Commitment	Normative Commitment
Exhaustion	141,04	236,21	62,68	17,57	191,28	226,31	147,18	52,99
Cynicism	65,48	82,87	6,39	4,09	66,14	70,48	121,40	57,88
Vigour	87,05	127,56	8,68	4,88	105,60	150,82	211,32	72,62
Dedication	23,66	54,14	28,39	0,21	64,74	124,42	222,26	64,74
	Exhaustion	Cynicism	Vigour	Dedication	Exhaustion	Cynicism	Vigour	Dedication
Job demands	173,40	101,12	35,83	12,90	69,53	2,17	2,17	6,01
Organisational support	1,09	1,09	39,30	1,09	105,28	77,87	85,28	85,28

Growth opportunities	11,31	28,96	92,97	152,10	100,11	31,19	140,83	119,60
Social support	0,67	24,09	60,40	84,71	62,73	77,02	69,69	77,02
Advancement	61,38	47,79	44,66	51,03	97,08	22,11	45,13	39,31
Insecurity	2,63	7,73	9,07	0,00	35,89	7,65	8,97	10,41

From Table 3 it is evident that LCRC members portrayed a high tendency both in year 1 and 2 to fall physically and psychologically ill due to exhaustion. The members also portrayed low vigour for year 1, which also attributed to them falling psychologically ill. LCRC members tended to derive a lower sense of significance from their work and felt less enthusiastic about their job in year 1 due to exhaustion. Furthermore, low work engagement can be regarded as a major risk factor for developing low affective commitment in year 2. Low work engagement in year 2 also presented as a moderate risk in terms of showing low levels of normative commitment.

The risk of burnout (exhaustion and cynicism) because of job demands was higher in year 1 than in year 2. Furthermore, a perceived lack of organisational support presented a substantial larger risk for developing burnout and low work engagement in year 2 compared with year 1. Low social support presented as a moderate risk for developing low work engagement in both years, while lack of advancement opportunities presented as a moderate risk for developing burnout.

The results of paired sample t-tests between the participants' scores on all the scales of the measurement model of work-related well-being in year 1 and 2 are reported in Table 4.

TABLE 4
 PAIRED SAMPLES T-TESTS

Item	Mean Difference	<i>SD</i>	<i>t</i>	<i>p</i>
1. Exhaustion	-1,05	6,44	-1,37	0,17
2. Cynicism	-0,84	4,92	-1,43	0,16

3. Vigour	0,61	5,19	0,98	0,33
4. Dedication	0,61	6,23	0,82	0,42
5. Organisational Support	-0,25	8,27	-0,25	0,80
6. Growth Opportunities	0,76	5,39	1,12	0,24
7. Social Support	0,44	3,89	0,95	0,35
8. Advancement	-0,62	3,56	-1,46	0,15
9. Job Insecurity	0,06	3,16	0,15	0,88
10. Job Demands	-0,34	4,80	-0,59	0,56
11. Physical Ill Health	0,05	4,13	0,10	0,92
12. Psychological Ill Health	-0,60	6,81	-0,73	0,47
13. Affective Commitment	0,41	7,09	0,49	0,63
14. Normative Commitment	0,50	6,06	0,69	0,50

Table 4 shows that levels of Exhaustion and Cynicism decreased between year 1 and 2 while Psychological Ill Health increased during this period. Social Support, opportunities for Advancement and Job Demands decreased from year 1 to year 2. However, none of the differences between pre- and post-measurements was statistically significant.

CONCLUSIONS

The aim of this study was to evaluate the interventions implemented to address the levels of burnout and engagement of SAPS members. The pre- and post-measurement showed no significant differences in the levels of work-related well-being of participants. The post-intervention results did, however, indicate that LCRC members portrayed a high risk to fall ill due to exhaustion. Within the LCRC, members were less enthusiastic about their jobs and tended to derive a lower sense of significance from their work. Members further showed a major risk for developing low affective commitment due to low work engagement.

The first objective of this study was to calculate the levels of risk for burnout, low work engagement, ill health and low organisational commitment of LCRC members to guide the development of an intervention strategy for the LCRC. The estimate of the risk associated with exposure to a specific factor showed that LCRC members portrayed a high risk to fall physically

and psychologically ill due to exhaustion. This finding correlates with Bakker, Demerouti, and Schaufeli (2003) who found that high job demands lead to health problems.

Within the LCRC, a higher risk of burnout (exhaustion and cynicism) was found because of high job demands and a lack of support within the LCRC. These findings are in accordance with Le Fevre et al. (2006) who, stated that distress occurs when demands placed on the body exceed its capacity to extend energy in homeostasis. The members portrayed a high risk of falling psychologically ill due to low vigour. Within the LCRC, members were less enthusiastic about their job and tended to derive a lower sense of significance from their work (lower dedication). Members furthermore portrayed a major risk for developing low affective commitment due to low work engagement. Bakker, et al. (2003) confirmed these findings stating that employees who experience social support from their colleagues are more dedicated to their job and committed to their organisation and are consequently less inclined to leave the organisation.

The second objective of this study aimed at investigating the aspects that should be included in an intervention programme directed at work-related well-being. The abovementioned results guided the levels of intervention (primary, secondary and tertiary) since it was clear that they should be targeted at organisational and individual level. From the literature, it was found that a multi-dimensional approach combining organisational and individual directed intervention strategies is likely to be an effective option to deal with stress in the workplace. In order to plan multiple level interventions for LCRC members of the SAPS, an intervention approach of both the positive and negative aspects of work-related well-being on the organisational and individual level was presented to members of the LCRC over a one-year period.

On an individual level, interventions aimed at reducing stress by providing skills to the members to understand and cope with pressure and stress. The interface between members and their work was applied on both individual and organisational level. Organisational level interventions targeted issues such as policies and practices to prevent employee stress on an organisation-wide basis.

Primary level interventions aimed at informing management regarding the resource needs of the unit. However, attention was not given to these needs until after the last assessment was conducted. On a secondary level, members were equipped with skills in managing stress symptoms, seeing that work that becomes too challenging demands more knowledge, skills and

abilities (Schabracq, 2003). Some members experienced a crisis however, and were in need of medical attention for physical ill health. These members were referred to the Employee Assistance Programme and were, subsequently, hospitalised.

Secondary level interventions that were applied to address aforementioned included team enhancement sessions to increase colleague support on unit level. Positive feedback was received and members communicated their need for each other's support during the difficult time. Kompier and Kristensen (2000) state that most programmes aim at the reduction of the cognitive appraisal of stressors and their subsequent effects rather than the reduction or elimination of these stressors.

In order to reduce or eliminate stressors, the management of each unit was also trained in helping skills and trauma management skills to support their members. On a primary level, representations were made to senior management to reconsider moving LCRC members to different locations. Only a few of these representations were successful. On a tertiary level, counselling and support were provided on a regular basis to assist members to cope with their changing circumstances.

Finally, the last objective was to evaluate interventions used to promote work-related well-being of LCRC members. The evaluation concluded that no significant differences were found between the levels of work-related well-being between the pre- and post-measurement, thereby indicating that the interventions were not successful in bringing about change to the LCRC. Considering the problem-focused and holistic level, a possible reason could be that the organisation was not ready to be part of the intervention, as indicated as one of the characteristics of interventions by French and Bell (1999). Internal and external resources were further not available to facilitate successful change according to the needs of the LCRC members (French and Bell, 1999). Although the dual-process model, as suggested by Bakker and Geurts (2004), was utilised it was difficult to tailor the interventions according to the members' job characteristics seeing, that certain job aspects were stipulated on national level and could not be altered.

Furthermore, it was difficult to suggest and implement change in the LCRC environment where no health related policy or practice to prevent (or merely acknowledge) stress exists. This is in accordance with research from Giga et al. (2003), stating that individual-focussed interventions

often fail due to senior management failing to take responsibility. Kompier (2003) further states that support from top management is essential to promote work-related well-being.

One possible reason why the preventative intervention strategies failed is that the organisation were undergoing a restructuring process (Resolution 7) resulting in members feeling less supported in the organisation and this increased their levels of burnout. This finding supports a study of Schabracq (2003), indicating, uncertainty and rumours about the future of members' jobs can unsettle their feelings of safety. It seems that members seem to feel less committed to the organisation and perceive that the organisation does not value them and look after their needs. It can only be speculated that aspects such as few opportunities for advancement, few training opportunities and resource needs not being met could affect their level of commitment, thereby confirming the motivational process as described in the COBE model of Schaufeli and Bakker (2004).

Bearing in mind the difficult environments in which the interventions were applied, some positive aspects did flow from the interventions. For instance, after consultation with management, more posts were allocated to the LCRC and their resource needs were addressed. It is clear, however, that the role of management is crucial when instigating management and prevention strategies, recognising risk factors and supporting members.

This study was not without limitations; firstly, although longitudinal research is favoured for intervention research, it does have the disadvantage that once the study is underway, it is difficult to manage the possibility of members withdrawing, as was the case in this study where a withdrawal rate of 36% was recorded. Secondly, the execution of Resolution 7 midway through the research led to almost 25% of the members of the original sample being transferred to other components. This led to a considerable decrease in the sample size from the pre-test ($N=111$) to the post-test ($N=71$).

Secondly, with the lack of a control group it is difficult to determine whether the interventions had a positive effect without comparing it against a control group. Only LCRC members in the North West Province were included in the sample. Based on the results obtained in this study, future studies should make use of larger and more representative samples outside the border of the North West Province.

IMPLICATIONS FOR MANAGERS

The results from this study emphasised the importance of the management of an organisation being part of intervention and support strategies in order to retain personnel. Intervention strategies should firstly start at primary level with issues such as policies and practices on employee health and work-related well-being. Management must understand their role in supporting employees on both emotional and physical level. If managers succeed in effectively supplying resource needs, employees' work might become a positive and fulfilling experience. It is recommended that within the SAPS, a support structure should be developed and a more participative decision-making process be followed when organisational changes are made.

Managers should also make the paradigm shift that not only individual, but also organisational-based strategies must be developed if stress and burnout in the organisation are to be effectively identified, prevented and reduced. The strategies should not only comprise plans to prevent and manage stress, but should also include management's support and acknowledgement of the stressful policing environment that members have to face daily.

It is clear that a more focused approach is necessary in terms of human resource training in South Africa as stated by Mlambo-Ngcuka (2006). Ultimately to fulfill the Batho Pele principle employee health and wellness should receive more attention in order for the country as a whole to benefit and to reach the objective of ASGISA for 2014. It is clear that without ongoing support, the benefits of an intervention programme are often temporary, thereby concluding the initial aim of this study, which was to evaluate the interventions implemented to address the levels of burnout and engagement of SAPS members.

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TESTING THE RELIABILITY OF THE TEN ITEM PERSONALITY INVENTORY (TIPI) MEASURE WITHIN A SOUTH AFRICAN CONTEXT

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ABSTRACT

An understanding of consumer personality is important, because personality directly influences consumer behaviour, decision-making and purchase intentions. Personality measures used for industrial usage are lengthy and time-consuming to complete and are not frequently used for marketing and consumer behaviour research. The Ten Item Personality Inventory (TIPI) measure offers marketing researchers an instrument to measure consumer personality with only 10 items. The objective of this study is to determine whether TIPI is reliable to measure young South African adults' personality types in terms of the Big Five personality domains. Data was

collected via self-administered questionnaires from 315 respondents by means of non-probability convenience sampling. Results from this study indicate that TIPI is not reliable measure to measure young South African adults' personality types.

INTRODUCTION

It is important for marketers to understand consumer personality as it is believed that personality not only influences consumer decision-making, but is also instrumental to the behaviour and intentions of consumers (Barrena & Sánchez, 2009:145, 153; Wong & Hsu, 2008:78; Gountas & Gountas, 2007:73; Rousseau & Du Plessis, 2007:215; Orth, 2005:116). Lamb, Hair, McDaniel, Boshoff and Terblanche, (2008:84, 94) concur by suggesting that the products and services consumers use directly reflect their personalities, while Gountas and Gountas (2007:74) believe that different personality types have different responses to service provision. Understanding consumer personality could be beneficial for marketers, because personality traits are often used in psychographic segmentation, assisting in product positioning, establishing media guidelines, guiding the copy writing in advertising and in the introduction of new products (Rousseau & Du Plessis, 2007:219).

More than 650 personality traits have been identified (Ruskin-Brown, 2006:80) ensuing a dilemma of providing an economical and comprehensive description of personality which led to personality researchers working and researching the number of traits that best qualify as descriptors of personality, resulting in what is commonly referred to as the Big Five personality domains (Soto & John, 2009:84; De Bruin, 2006:155-156; Wright, 2006:308). Personality researchers find it difficult to study consumer personality (Ruskin-Brown, 2006:80). Also, existing personality measures of the Big Five personality domains (Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to experience) used for industrial usage are lengthy and the completion thereof is time-consuming (Pride & Ferrell, 2010:204). These measures were not developed for ultimate use in marketing and consumer behaviour research, and the application thereof is not used for marketing and consumer behaviour purposes. For this reason, Gosling, Rentfrow and Swann (2003:504) developed the Ten Item Personality Inventory (TIPI) measure to categorise individuals according to the Big Five personality domains, which, as the name suggests, contains 10 measurement items. Although tested among university students in the United States, the measure has not been tested in South Africa.

The purpose of this paper is to determine the reliability of the TIPI within a South African service setting among young adults. The paper firstly provides a theoretical overview of consumer decision-making, personality and a discussion of the Ten Item Personality Inventory. The problem statement and objective as well as the methodology follow. Next, the results are reported, followed by conclusions and recommendations. The paper is concluded by providing the contribution of the study, listing limitations and providing recommendations for future research.

THEORETICAL OVERVIEW

This section provides an overview of the consumer decision-making process and the influence of personality on this process. Personality is defined and the trait theory, the most commonly used personality theory in consumer behaviour, is briefly discussed with a focus on the Big Five personality domains as they are used in TIPI.

Consumer decision-making

Marketers should have a thorough understanding of consumer behaviour and decision-making, as consumers' purchase and consumption choices stem directly from the decision-making process (Blackwell, Miniard & Engel, 2006:67). Consumer decision-making can therefore be regarded as the basic framework of consumer behaviour (Rice, 1993:296). Various authors view the consumer decision-making process to consist of five distinguishable phases, namely need recognition, information search, evaluation of alternatives, purchase behaviour and post-purchase evaluation (Pride & Ferrell, 2010:196-198; Peter & Donnelly, 2008:47; Rousseau, 2007:260, 263; Assael, 2004:31; Schiffman & Kanuk, 2004:554).

Schiffman, Kanuk and Hansen (2008:75), Rousseau (2007:261-262) and Blackwell *et al.* (2006:71) identify six external or environmental influences that affect the consumer decision-making process, namely culture, social class, references groups, the family, economic demand factors as well as organisation and marketing activities. Schiffman *et al.* (2008:75), Rousseau (2007:261-262) and Blackwell *et al.* (2006:71) also identify six internal or individual influences, which, by controlling the internal thought processes of consumers, affect the decision-making process, namely needs, motives, perception, learning, attitudes and personality. Personality influences consumers' reactions to all other external and internal influences (Rousseau & Du Plessis, 2007:215; Wright, 2006:296) and will now be further explored for the purpose of this study.

Consumer personality

Hawkins and Mothersbaugh (2010:373) and Hoyer and MacInnes (2008:371) define personality as that inner characteristic that determines how individuals behave across similar situations. Personality differentiates an individual from others, even if they have similar backgrounds, values and beliefs (Hoyer & MacInnes, 2008:371; Schiffman & Kanuk, 2004:120-121). Rousseau and Du Plessis (2007:215) and Schiffman and Kanuk (2004:121) elaborate by explaining that an individual's personality is consistent and reflects enduring patterns of behaviour. On a more technical level, personality is identified as that aspect of an individual's psyche that determines the unique, relatively stable adjustment to the environment in the long term (Baines, Fill & Page, 2008:111; Lamb *et al.*, 2008:83).

The influence of personality on consumer behaviour and consumer decision-making is of particular interest to marketers as it is believed that consumers' personalities influence both their purchasing intention and actual behaviour (Chen & Lee, 2005:487). This becomes evident when marketers, for instance, use personality for a number of purposes: developing products for certain personality types (Hawkins & Mothersbaugh, 2010:375; Hoyer & MacInnes, 2008:378), market segmentation (Hoyer & MacInnes, 2008:379; Chen & Lee, 2005:494), creating brand images (Hawkins & Mothersbaugh, 2010:376; Lamb *et al.*, 2008:83), developing advertising and marketing messages (Pride & Ferrell, 2010:205; Hoyer & MacInnes, 2008:378; Blythe, 2006:192) and positioning their product or image in the marketplace (Barrena & Sánchez, 2009:144).

For marketers to effectively target consumer personality types in their strategies, it is important to consider the various approaches and theories used in social sciences to study personality (Hoyer & MacInnes, 2008:371).

Personality theories in the fields of marketing and consumer behaviour

Various personality theories are proposed by consumer behaviour researchers (Hawkins & Mothersbaugh, 2010:374-375; Hoyer & MacInnes, 2008:371-378; Rousseau & Du Plessis, 2007:216-219; Blackwell *et al.*, 2006:271-273; Wright, 2006:296-332; Assael, 2004:295; Solomon, 2004:188-194). However, for the purpose of this paper, only four of the most commonly used theories in marketing and consumer behaviour will be briefly discussed, namely

the self-concept theory, the Freudian or psychoanalytical theory, the social theory and the trait theory. The main features of each theory are summarised in Table 1.

Table 1: Main features of the four personality theories referred to in the field of marketing and consumer behaviour

Personality theory	Self-concept theory	Freudian theory	Social theory	Trait theory
Behaviour determined by:	Actual self-image and ideal self-image determine behaviour	Biological, instinctual, unconscious needs or drives determine behaviour referred to as motivation research	Social needs determine behaviour	Pre-dispositional traits determine behaviour

Source: Compiled from Rousseau and Du Plessis (2007:216-218), Blackwell *et al.* (2006:271-273), Assael (2004:295-296, 199-301) and Schiffman and Kanuk (2004:121-126).

With the *self-concept theory*, consumers have a certain view of themselves, referred to as their self-concept (Hawkins & Mothersbaugh, 2010:428). Rousseau and Du Plessis (2007:218), Assael (2004:300) and Rice (1993:60-61) argue that the self-concept theory entails that a consumer's self-image (the way they see themselves) (Schiffman & Kanuk, 2004:143-144) or ideal self-image (the way the consumer wants to be) (Hawkins & Mothersbaugh, 2010:428) influences their behaviour.

Pertaining to the *Freudian or psychoanalytical theory*, Rousseau and Du Plessis (2007:217) assert that Freud stressed the importance of the unconscious nature of personality and motivation. While Baines *et al.* (2008:111) explain that Freud considered consumers to be irrational, Fill (2006:120) suggests that Freud believed in two primary motivators of human behaviour: the one being life and the other death. While life instincts, for the most part, focus on sexual drives, death instincts become apparent through self-destructive and/or aggressive behaviour. This perspective assumes that consumer personality develops to gratify the life and death drives through the id (the source of those basic and instinctual needs that require immediate satisfaction), superego (representing the individual's internal expression of societal or personal norms acting as ethical constraint on behaviour) and ego (the internal conscious control that attempts to balance the impulsive demands of the id with the societal and moral

constraints of the superego) (Blackwell *et al.*, 2006:271; Fill, 2006:120; Schiffman & Kanuk, 2004:122-123; Desmond, 2003:249).

The *social theory* investigates the development of personality through social relationships. Blackwell *et al.* (2006:272) highlight the fact that the social theory focuses on the interdependence of the consumer and society. This interrelationship is found in the consumer's endeavour to meet society's needs and, in turn, society assists the consumer to attain personal goals. The social theory can therefore be regarded as a neo-Freudian theory, because this theory seems to be the opposite of what Freud understood personality to be (Rousseau & Du Plessis, 2007:218).

Baines *et al.* (2008:112-113), Rousseau and Du Plessis (2007:216) and Wright (2006:305) explain that the *trait theory* views personality as consisting of a mixture of traits, which describe general response predispositions, whereby consumers are categorised into personality types according to specific traits. Rousseau and du Plessis (2007:216) propound that trait theory is the most widely used personality theory in the field of consumer behaviour, because it is grounded in the empirical theory of personality.

In order to provide an economical but comprehensive description of personality with more than 650 identified traits (De Bruin, 2006:155-156), researchers constructed the number of traits that best qualify as descriptors of personality, resulting in what is commonly referred to as the Big Five personality domains (Soto & John, 2009:84; Wright, 2006:308).

Big Five personality domains

Bernard, Walsh and Mills (2005:42) and Donahue (1994:46) explain that the traits contributing to the five broad domains share a semantic theme, which was used to label the Big Five personality domains as Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to experience.

Since the Big Five personality domains are viewed to encompass the breadth of personality (Wood, Joseph & Maltby, 2009:444), Vecchione and Caprara (2009:487) propose that the Big Five personality domains act as an all-inclusive framework to deal with the main individual differences in personality. Specific characteristics associated with each domain are briefly examined.

Extraversion is associated with characteristics such as being sociable, fun-loving and affectionate (Pineles, Vogt & Orr, 2009:48), while introverts, the opposite of extraverts, are quiet, composed and unmoved with respect to events in the external environment (Desmond, 2003:233).

Tonetti, Fabbri and Natale (2009:186) view *Agreeableness* as a concern and sensitivity for others' needs. Pineles *et al.* (2009:48) identify *Agreeableness* through characteristics such as selflessness and being sympathetic, understanding, compassionate and accommodating. Tonetti *et al.* (2009:186) refer to the self-regulating quality of *Conscientiousness* in terms of both proactively and inhibitory exercising self control. *Conscientiousness* manifests in being careful, reliable, hardworking (Pineles *et al.*, 2009:48), persevering, precise, dependable, determined and systematic (Goetzmann, Moser, Vetsch, Grieder, Klaghoffer, Naef, Russi, Boehler & Buddeberg, 2007:400).

Pineles *et al.* (2009:48) and Barrick and Mount (1991:4) assert that consumers displaying high levels of *Neuroticism* are characterised as being anxious, depressed, angry, embarrassed, worried, self-conscious and insecure, which is also referred to as emotional instability. Consumers *Open to experience* are imaginative, curious, broadminded (Pineles *et al.*, 2009:48), inquisitive, value new experiences and possess independent judgement (Goetzmann *et al.*, 2007:400). Whelan and Davies (2006:396, 399) regard consumers who are *Open to experience* as risk takers and such consumers are therefore most likely to purchase a new product or service.

Previous research on the Big Five personality domains in the field of marketing found differences between genders as females are more Conscientious while males are more Open to experience (Tonetti *et al.*, 2009:187). Furthermore, an association between personality traits and attending a fitness centre was found (Chen, Lee & Chang, 2007:1323). Also, the Big Five personality domains can be used to identify music preferences (Delsing, Ter Bogt, Engels & Meeus, 2008:125-126) and to distinguish between hedonistic and utilitarian consumers (Guido, Capestro & Peluso, 2007:368).

Ten Item Personality Inventory

Gosling *et al.* (2003:506) explain that the search for a shortened personality test is nothing new, with a number of measures proposed in the past decade, including the 44-item Big Five Inventory (BFI), the 60-item NEO Five-Factor Inventory (NEO-FFI) and Goldberg's 100-item trait descriptive adjectives (TDA). Recognising the need for an even shorter measure, Saucier (1994) adapted Goldberg's 100-item measure by proposing a 40-item instrument. The main drawback of these measures, despite being shortened, is that it takes between five and 15 minutes to complete, thereby necessitating the need for an even shorter measurement instrument.

Gosling *et al.* (2003:516) therefore developed a ten item personality inventory measure based on Goldberg's (1992) measure as well as that of the BFI. The resulting Ten Item Personality Inventory (TIPI), claiming to be completed in one minute, requires that respondents rate the degree to which they agree with each of the ten items (shown in Table 2) on a 7-point Likert scale to measure personality types, where 1 = disagree strongly, 2 = disagree moderately, 3 = disagree a little, 4 = neither agree nor disagree, 5 = agree a little, 6 = agree moderately and 7 = agree strongly. Each item consisted of two traits and respondents had to rate the extent to which the pair of traits applies to them even if one characteristic applies more strongly than the other (Gosling *et al.*, 2003:525). Gosling *et al.* (2003:525) propose that each domain of the Big Five personality domains has two items measuring the domain, where reversed-scoring is used for one of the items of each domain. Table 2 summarises the statements of TIPI together with the realised Cronbach alpha values when testing the TIPI measure among 1 813 university students in the United States (Gosling *et al.*, 2003:516).

Table 2: Measurement of personality

Statement		Cronbach alpha value
Extraversion	1) Extraverted, enthusiastic	0.68
	6) Reserved, quiet*	
Agreeableness	2) Critical, quarrelsome*	0.40
	7) Sympathetic, warm	
Conscientiousness	3) Dependable, self-disciplined	0.50
	8) Disorganised, careless*	
Neuroticism	4) Anxious, easily upset*	

	9) Calm, emotionally stable	0.73
Openness to experience	5) Open to new experiences, complex	0.45
	10) Conventional, uncreative*	

* reversed scored items

For the purpose of this study, the TIPI will, despite the seemingly low Cronbach alpha values, not be adapted in any way, but will be used in the exact manner as proposed by Gosling *et al.* (2003:525).

STUDY OBJECT

Rousseau and Du Plessis (2007:219) suggest that marketers could benefit from personality research to segment markets, guide product positioning, establish media guidelines, provide direction in copy writing of advertisements, and introducing new products. It is of particular importance for marketers to target young adults, as they are entering the labour force, which implies an increase in their purchasing power (TNS Research Surveys, 2007). Each young adult has a specific personality type because personality develops from genetics and the learning history of the individual (Mowen, Park & Zablah, 2007:590-591). It was therefore decided to focus this study on young adults (18 to 25 years old), since they have clearly distinguishable personality types and are the similar age group used by Gosling *et al.* (2003:516) to test the reliability of TIPI in the United States.

PROBLEM STATEMENT AND OBJECTIVE

No previous studies were found that used young adult consumers to determine the reliability of TIPI within a South African context. The objective of this study is to use the TIPI on young adult consumers in South Africa and to determine the reliability of the TIPI measure of the Big Five personality domains as proposed by Gosling *et al.* (2003:504).

RESEARCH METHODOLOGY

Sample and data collection

The population of this study consisted of young adults (between the ages of 18 and 25 years old) (Callen-Marchione & Ownbey, 2008:369) who study at a well-known South African university. Non-probability convenience sampling was used to gather data from 315 respondents by means of self-administered questionnaires. This sampling method was chosen

as it is simple, quick and inexpensive to use (Aaker, Kumar & Day, 2007:395). Trained fieldworkers approached potential respondents to participate in the study. To be eligible to participate in the study, respondents had to be enrolled at the particular South African university and between the ages of 18 and 25. Only those who passed these filter questions, were requested to complete the questionnaires.

Measuring instrument

A self-administered questionnaire was used as the measuring instrument. Data pertaining to respondents' demographic variables was captured. The questionnaire also contained the TIPI measure as proposed by Gosling *et al.* (2003:525), whereby respondents had to rate each item on a 7-point Likert scale to measure personality types, where 1 = disagree strongly, 2 = disagree moderately, 3 = disagree a little, 4 = neither agree nor disagree, 5 = agree a little, 6 = agree moderately and 7 = agree strongly. As stated earlier, each item consisted of two traits and respondents had to rate the extent to which the pair of traits applies to them even if one characteristic applies more strongly than the other (Gosling *et al.*, 2003:525).

Reliability

Reliability reflects the consistency of a measure (Zikmund & Babin, 2010:334; Sprinthall, 2003:477). Internal-consistency reliability assesses the reliability of the test based on the consistency that occurs within the test (Sprinthall, 2003:480), that is the homogeneity of the test (Zikmund & Babin, 2010:334).

One method to determine internal consistency is to use inter-item correlations such as Pearson product-moment correlation (for interval or continuous variables such as the scale used for the items of TIPI) and Spearman rank order correlation (for ordinal data) (Pallant, 2007:126). Correlation coefficients, such as Pearson product-moment correlation, can have a maximum value of +1 and a minimum value of -1 (Zikmund & Babin, 2010:334; Field, 2005:32). Items belonging to the same Big Five personality domain should have a negative correlation with each other as reversed scoring was used for one of the two items measuring each domain.

Pearson product-moment correlation was used to determine the internal consistency (reliability) of the data obtained in this study as Likert scaling was used. The methodology used in this study, where the self-administered questionnaire was distributed once via convenience

sampling only with the TIPI personality measure, did not allow for test-retest reliability or parallel-form reliability.

Data analysis

It was decided to perform frequency analyses for the demographic data together with inter-item correlations to determine the reliability (internal consistency) of TIPI to measure respondents' personalities by means of the SPSS statistical programme (SPSS, 2007). The inter-item correlations were used to determine the reliability of the TIPI to measure young South African adults' personality types in terms of the Big Five personality domains.

RESULTS

Sample profile

Table 3 provides an overview of the respondents who participated in the study. The convenience sample included both males and females. As it was an explicit requirement, all respondents were between 18 and 25 years old.

From Table 3 it can be derived that more females (61.3%) participated in this study than males (38.7%). Less than 10% of respondents were 18 but younger than 19 (9.5%). The majority of respondents (79.4%) were aged between 19 and 22 with 7.9% of respondents being 23 but younger than 24 and only 3.2% of respondent being 24 years and older.

Table 3: Respondents' demographic profile

DEMOGRAPHIC VARIABLES	n=315	
Gender	F	%
Male	122	38.7
Female	193	61.3
Age	F	%
18 but younger than 19	30	9.5
19 but younger than 20	64	20.3
20 but younger than 21	63	20.0
21 but younger than 22	68	21.6
22 but younger than 23	55	17.5

23 but younger than 24	25	7.9
24 or older	10	3.2

Reliability of the TIPI measure

Inter-item correlations were determined to examine whether the interval scale items used to measure personality can be grouped according to the Big Five personality domains as proposed by Gosling *et al.* (2003:516). Table 4 presents the inter-item correlation matrix.

Table 4: Inter-item correlation matrix between personality items

PEARSON CORRELATION	PRODUCT-MOMENT	1	2	3	4	5
1 Extraverted, enthusiastic		1	.121	.258**	-.072	.298**
2 Critical, quarrelsome		.121	1	-.011	.319**	.018
3 Dependable, self-disciplined		.258**	-.011	1	.015	.204**
4 Anxious, easily upset		-.072	.319**	.015	1	-.160**
5 Open to new experiences, complex		.298**	.018	.204**	-.160**	1
6 Reserved, quiet		-.450**	.053	-.072	.140	-.194**
7 Sympathetic, warm		.134	-.065	.277**	.042	.245**
8 Disorganised, careless		-.044	.107	-.315**	.157**	-.026
9 Calm, emotionally stable		.002	-.100	.333**	-.218**	.208**
10 Conventional, uncreative		-.136	-.020	-.051	.060	-.239**

**Correlation is significant at the 0.01 level (2-tailed).

The inter-item correlations in Table 4 revealed that item 1 had a negative correlation with item 6 ($r = -.450$). Also, item 1 showed significant correlations with item 3 (.258) and item 5 (.298). Although a negative correlation between item 1 and item 6 for the scale was found as indication of reliability to measure Extraversion, the correlations with other dimensions makes this reliability questionable.

Concerning item 2, Table 4 shows that there was only a significant correlation with item 4 ($r = .319$). There should have been a negative correlation between item 2 and item 7 for the scale to be reliable to measure Agreeableness, which makes this dimension not reliable. Furthermore, item 3 does have a negative correlation with item 8 ($r = -.315$) as needed for reliability, but item 3

also correlated significantly with item 1 ($r=.258$), item 5 ($r=.204$), item 7 ($r=.277$) and item 9 ($r=.333$), making this dimension not reliable to measure Conscientiousness.

Table 4 furthermore indicates that item 4 correlated negatively with item 5 ($r=-.160$) and item 9 ($r=-.218$). Item 4 also correlated significantly with item 2 ($r=.319$) and item 8 ($r=.157$). Although a negative correlation between item 4 and item 9 for the scale was found as indication of reliability to measure Emotional stability, the correlations with other dimensions makes this reliability questionable.

Concerning item 5, Table 4 shows that there were negative correlations with item 4 ($r=-.160$), item 6 ($r=-.194$) and item 10 ($r=-.239$). There were also significant correlations between item 5 and item 1 ($r=.298$), item 3 ($r=.204$), item 7 ($r=.245$) and item 9 ($r=.208$). Although a negative correlation between item 5 and item 10 for the scale was found as indication of reliability to measure Openness to experience, the correlations with other dimensions makes this reliability questionable.

A confirmatory factor analysis to confirm the existence of the hypothetical factors in a fresh set of data (by comparing the results to those of Gosling *et al.*, 2003:504) (Zikmund & Babin, 2010:625) was therefore not performed due to the items not correlating as proposed by Gosling *et al.* (2003:525).

CONCLUSIONS AND RECOMMENDATIONS

This study envisaged to determine whether the TIPI measure of the Big Five personality domains is reliable to measure young South African adults' personality types in terms of the Big Five personality domains. The TIPI was proposed as a personality measure for marketing and consumer behaviour research because of its ease of application and the fact that there existed a need for a shortened personality measure in marketing research.

It was seen in the results that the TIPI measure of the Big Five personality domains is not reliable to measure young South African adults' personality types. A possible reason for this could be that respondents were not completely honest when completing the questions measuring personality as proposed by Gosling *et al.* (2003:504). Rice (1993:59) asserts that the problem with personality measures is that there is a tendency by respondents to answer questions either as the respondent thinks a 'normal' person would, or as respondents wish

themselves to be. Furthermore, at a deeper philosophical level there is a problem of whether the way individuals see themselves is the same as others see them (Rice, 1993:59). The researchers therefore believe that respondents did not intentionally try to corrupt the study by answering questions in a deceitful manner, but that respondents were more prone to answer questions related to their personality in accordance with their ideal self-image in a socially acceptable manner than their actual self-image (Rousseau & Du Plessis, 2007:218), specifically regarding Agreeableness and Emotional stability. Young adults want to be seen as Agreeable and Emotionally stable and are therefore susceptible to providing data in the way that they would like to be seen.

As each item in TIPI consisted of two traits and respondents had to rate the extent to which the pair of traits applies to them, the reliability might have been compromised because the trait pairs do not always mean the same, for example 'critical' and 'quarrelsome' are two different personality traits, as are 'calm' and 'emotionally stable'.

It is therefore recommended that the TIPI be tested among other groups (for example older people) to determine whether the issue of reliability was due to the proposed measure itself or the age group targeted in the study. Also, the traits used in pairs for the 10 items (or at least the labels ascribed to each) should be researched as to determine whether other items (or a single trait for each item) could improve the reliability of TIPI. Marketers could also consider developing personality measures based on other personality theories than the Big Five personality domains in the search for a reliable personality measure for marketing and consumer behaviour purposes.

CONTRIBUTION OF THE STUDY

This study contributed to academic research in that it empirically tested the reliability of the TIPI measure as suggested by Gosling *et al.* (2003:504) to measure personality. A shortened personality measure was created, which supposedly had relevance for marketing as previously developed personality measures were more suited for industrial use than for marketing and consumer behaviour research. Through its findings, this study shows that the TIPI is not reliable to measure consumer personality (specifically of young South African adults), thereby necessitating the need to adapt and re-work the proposed measure. Herein lies the biggest contribution: to illustrate the importance of reliability and to share results that may ostensibly be judged as not adding value because of its inconclusive findings.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The primary limitation of this study is that the findings are only representative of those who participated, because non-probability convenience sampling was used. The sample was furthermore relatively small and limited to only a single South African university. Recommendations for future research include measuring an adapted TIPI measure among older individuals (who could, arguably, be more confident about their personalities and less inclined to be socially acceptable in their responses concerning their personalities) in an attempt to develop a reliable instrument. Once this has been achieved, researchers should attempt to adapt the measure to determine younger consumers' personalities. Future research also holds the opportunity to perform cross-discipline research, whereby marketing researchers can work closer with psychologists to develop a shorter personality measure, specifically tailored for consumer behaviour research.

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THE WORKPLACE ANTECEDENTS OF THE INTENTION TO EMIGRATE

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Key Words: Intention to emigrate; job satisfaction; job insecurity; perceived organisational support; organisational commitment

ABSTRACT

The aim of this study was to determine the relationship between organisational antecedents (including job satisfaction, job insecurity, perceived organisational support, organisational

commitment) and the intention to emigrate in a sample of academic and support personnel in a higher education institution. An availability sample with a cross-sectional design was used. The sample consisted of ($N=120$) academic and support staff on a campus of a higher education institution in the North West Province. Four measuring instruments were administered that focused on the organisational specific antecedents, as well as the Intention to Emigrate Scale. The results showed that perceived organisational support has a significant relationship with the intention to emigrate. Through regression analyses it was found that perceived organisational support, as organisational antecedent, is the most significant predictor of the intention to emigrate.

INTRODUCTION

There is consensus that contemporary South Africa is experiencing a critical and growing skills shortage and brain drain (Daniels, 2007: 1; Du Preez, J., 2002: 82). The relation between workers migrating to and from South Africa is unbalanced, resulting in many skilled South Africans immigrating to other countries but without noticeable skilled immigration into South Africa (Bhorat, Meyer and Mlatsheni, 2002: 52). This exodus of scarce skills from South Africa to countries like Australia, Canada, New Zealand, the USA and the UK has had a significant impact on the social and economic development of the country. The brain drain has further had an effect on the economic growth, which has been disrupted by a shortage of executive and mid-level managers and technical staff (Bornman, 2005: 388; Glass and Choy, 2001: 621).

According to a Human Sciences Research Council (HSRC) report (2004: 1) the following groups were believed to have skills shortages: educators, academics, medical practitioners and nurses, engineers, technicians, biotechnologists, managers, and information and communication technology professional. The mass departure of skilled workers can significantly reduce a country's capability to develop as a knowledgeable society and affect the country's ability to compete effectively in the global economy (Van Tonder, 2004: 1). This can drain the source of the country's level of human capital and reduce the ability to achieve as much technological progress as other economies (Class and Choy, 2001: 623). Organisations are losing some of their highly skilled employees – employees who are usually also very experienced. Many organisations spend vast amounts of money to replace these skilled employees when they leave the organisations and the possibility exists that the new employees do not necessarily have the experience or skills to fulfil the function and this costs organisations a great deal of money for them to be trained (Firth, Mellor, Moore and Loquet, 2004: 177).

PROBLEM INVESTIGATED

The HSRC (2004: 1) found that the majority of skilled workers who emigrate are professionals, semi-professionals and those in technical occupations, between the productive ages of 25 and 45 years. This means that the country loses workers who are already qualified and established professionals in the South African workforce. In 1994, former president Nelson Mandela in the Cape Times described the emigration of skilled workers from South Africa as “a national tragedy” (Du Preez, B.M., 2003: 62). Emigration literature suggests that highly educated employees perceive that they will receive greater compensation as a result of emigration – they are of the opinion that they have better career opportunities in other countries than people with lower educational levels (Miller, Haskell and Thatcher, 2002: 19). The South African government has time after time expressed its concern about the skills it loses to the United Kingdom and other Western countries (Bhorat *et al.*, 2002: 52). These skills are lost as a result of enthusiastic recruitment, predominantly in the health, education and information technology fields. With educators, specifically, the lost skills have a serious influence on the development of new skills. A former Minister of Education of South Africa, Prof. Kader Asmal, attempted to improve the brain drain situation in South Africa by calling for stricter regulation of the international migration of professionals from South Africa (Asmal, 2004: 1). This confirms that the government is aware that the development of the country is disrupted and slowed down by brain drain and that the slower the development, the less conducive the market is for international skills and investments. Lower levels of economic growth and insufficient direct foreign investment will further promote the underdevelopment and poverty in South Africa (Waller, 2006: 1).

The decision to emigrate is not taken lightly and involves a lot of contemplating and many motivators. Not only the push and pull factors motivate the highly skilled to make the decision to leave the country. According to Waller (2006: 1), organisational factors such as affirmative action and preferential procurement, which are deeply rooted in the contemporary South African workplace, are also known as work related factors that motivate employees to emigrate.

RESEARCH OBJECTIVES

The aim of this paper is to establish the link between independent variables – over which the organisation has relative control (organisational antecedents) – and employee’s intention to emigrate.

General Objective

The general objective of this study is to determine the relationship between workplace antecedents (job satisfaction, job security, perceived organisational support and organisational commitment) and the intention to emigrate among the employees of a higher education institution in the North West Province.

Specific Objective

The specific objectives of this study are:

- To conceptualise the relationship between organisational antecedents (job satisfaction, job insecurity, perceived organisational support and organisational commitment) and the intention to emigrate according to the literature.
- To determine whether there is a relationship between organisational antecedents (job satisfaction, job security, perceived organisational support and organisational commitment) and the intention to emigrate among a sample of academic and support personnel at a higher education institution.
- To determine whether organisational antecedents (job satisfaction, job insecurity, perceived organisational support and organisational commitment) predict the intention to emigrate in a sample of academic and support personnel at a higher education institution.

To reach the above objective, the following part of the paper will focus on the organisational related antecedents – job satisfaction, job insecurity, perceived organisational support and organisational commitment – with specific focus on the control of the organisation associated with it.

LITERATURE REVIEW

Organisations are already struggling to fill vacancies that require special or scarce skills and consequently emigration and the intention to emigrate can be perceived to have implications for the organisation (Miller *et al.*, 2002: 190). Hom and Kinicki (2001: 206) state that employee turnover is one of the most researched work related behaviours. The content turnover theory (Maertz and Campion, 2004: 570) suggests that there are forces that motivate employees to quit their jobs. Some of these forces include affective forces. These forces relate to how the employee reacts and feels about the organisation, for instance insecurity about the future of

their employment at the organisation. Alternative forces refer to the situation where an employee perceives better opportunities than that offered in their current job, for example perceived organisational support in terms of development, rewards, pay and promotion. Calculative forces refers to whether the employee foresees that they will be satisfied with their job in the future if they continue employment (job satisfaction), and behavioural forces refers to the behavioural commitment to an organisation (organisational commitment) (Maertz, 2001: 5).

A study by Dekker (2006: 78) found that turnover intention and intention to emigrate are significantly related to each other. Through the identification of organisational antecedents of intention to emigrate encountered in the modern workplace, such as job satisfaction, job insecurity, perceived organisational support and organisational commitment, factors that the organisation has relative control over, the emigration of highly skilled workers could be minimised. These organisational antecedents are all related to each other and many researchers have studied these variables and their relations with one another. The organisation will be able to identify and rectify problem areas where necessary that could in turn create a more favourable working environment. In these difficult times organisations can hardly afford unnecessary costs; by retaining these highly skilled workers unnecessary recruitment and training costs will be avoided and at the same time the burden of the brain drain will be eased.

Organisations don't really have control over some of the push and pull factors such as crime, security and standard of living, which motivate workers to emigrate. However, the exploration of the relationship between organisational antecedents, such as job satisfaction, job insecurity, perceived organisational support and organisational commitment and employees' intention to emigrate can provide practical and important information and recommendations concerning the retention of highly skilled employees that is within moderate control of South African organisations.

Job Satisfaction

There are a number of factors that need to be taken into consideration when the job satisfaction of employees is determined. One of these factors is that employees form attitudes about the reciprocal relationship with their employer, such as pay, benefits, developmental opportunities, job security, leave and their hours at work (Erasmus, 1998: 27). An employee's job satisfaction has a significant influence on his or her emotions, performance and behaviour at work (Yousef, 2002: 250). Job satisfaction has also been described as the general feeling towards your job. It

is a positive effect resulting from the appraisal of the person's job; it can be regarded as a positive or negative emotional response to one's work as a consequence of the employee's needs that must be satisfied or fulfilled by his or her work (Cook, Hepworth, Wall, and Warr, 1981: 35). The levels of the outcome that employees receive and the level of the outcome that they feel they ought to – or deserve to – receive, creates a general feeling about the employee's job. This feeling can then contribute to an intention to quit the organisation, or even to emigrate. Nguyen *et al.* (2008: 1) found among nursing students in Uganda that job dissatisfaction is one of the factors that can push skilled professionals to other countries. The other factors include finding a job that is matched to the skills they have and the possibility to increase their rank.

According to Hui and Lee (2000: 229) and Testa (2001: 233), high levels of job satisfaction stimulate increased organisational commitment and job security among employees. This indicates that control, through job satisfaction, can be created by the organisation that ought to influence the intention of the employee to quit. Supervisors within organisations have to consider and be aware of the extrinsic and intrinsic sources of job satisfaction that are available to employees. Through this, sustaining and increasing the job satisfaction and organisational commitment of employees could lead to lower levels of turnover (Firth *et al.*, 2004: 175). According to Hackman and Oldham (1980: 259), there are three approaches to sources of job satisfaction, namely the dispositional, situational and interactionist approach.

The dispositional approach is described as psychological, which implies that employees' distinctive traits determine or have an influence on their job satisfaction (House, Shane and Herold, 1996: 210). The situational approach refers to external factors that have an influence on an employee's job satisfaction. These external factors can include the employee's relationship with colleagues and supervisors, organisational climate and the nature of the job (Arvey, Carter and Buerkly, 1991: 367). Lastly, the interactionist approach refers to the connection between the situational factors of the work situation and the dispositional traits of employees (Roberts and Foti, 1998: 260). Further contributors to job satisfaction include task variety, autonomy and responsibility, recognition and feedback, as well as creativity and achievement.

Enders (1997: 1) found that academic personnel's position and gender affect their levels of job satisfaction. This finding is confirmed by the works of Oshagbemi (2000: 332), whose found that woman at higher ranks, for example senior lecturers and professors, are more satisfied with their work than their male counterparts. Enders (1997: 1) further states that in the past the

academic profession has been characterised by high levels of job satisfaction. However, in contemporary higher education institutions the morale of academic staff is often thought to be lower than in past generations (Mcwatts, 2005: 78).

Job Insecurity

De Witte (1999: 157) states that in organisational literature there is an array of theoretical perspectives concerning the meaning of job insecurity, but even though job insecurity is of importance to both the employer and employee, there has been a lack of agreement on the theoretical overview of the job insecurity construct. Job insecurity has been described in many ways, which include an individually experienced concern about the unexpected job loss in the individual's future and the expectations about the stability of the job situation. Lastly it is described as a general concern about the future existence of one's job (Greenhalgh and Rosenblatt, 1984: 442).

According to De Witte (1999: 160), job insecurity falls between burnout and stress on the one hand and the psychological effect of unemployment on the other hand. It is related to employees who fear they might lose their jobs, thus resulting in being unemployed. This experience is an internal process and perceptual experience that is theoretically close to a cognitive interpretation and evaluation of events in the environment in which the employee finds him or her in (Jacobson, 1991: 25). Job insecurity is usually conceptualised from three perspectives: (1) as a global concept; (2) as a multidimensional concept; and (3) lastly as a job stressor. The majority of studies have measured job insecurity utilising the global concept (threat of job loss) instead of the multidimensional indicators (focussed on losing things or opportunities for promotion and development).

De Witte (2005: 4) suggests that reducing an employee's feelings of "unpredictability and uncontrollability" can alleviate the negative effects of job insecurity. He further suggests that even though a certain degree of job insecurity is unavoidable in times of an economic crisis, there are three ways in which the organisation can reduce feelings of job insecurity: through communication, participation and fairness. By ensuring that there is open communication about future events within the organisation, by allowing employees to participate in the decision-making process and finally through open communication and participation employees will perceive that they are being treated fairly by their organisation. Sverke *et al.* (2004: 23) suggests that employees' perceptions of job insecurity are frequently associated with a

decrease in organisational commitment. Miller *et al.* (2002: 18) confirm the existence of a relationship between organisational commitment and the intention to emigrate. This can occur where high levels of job insecurity result in lower levels of organisational commitment, and low levels of organisational commitment result in employees considering emigration.

Perceived Organisational Support

Any organisation values its employees' loyalty to it and employees who are emotionally committed to the organisation display higher levels of performance and lower absenteeism, and are less likely to quit their jobs (Coetzee and Rothman, 2005: 50). Today however, employees are more concerned with their employer's commitment to them; they perceive that being valued by their employer will produce benefits such as respect, pay, promotion, access to information and organisational support (Rhoades and Eisenberger, 2002: 701).

The organisational support theory proposes that employees develop universal beliefs about the degree to which their employer values their efforts and cares about their general well-being. This is utilised to determine the organisation's tendency to reward employees' increased efforts at work and to meet their social and emotional needs. The assurance that sufficient aid will be provided when employees need it to effectively carry out their jobs and to cope with stressful situations is seen as the employee's perceived organisational support (POS) (Rhoades and Eisenberger, 2002: 711). Employees believe that their employer generally has a positive or negative orientation towards them that encompasses both recognition of their contributions and concern for their welfare (Eisenberger, Stinglhamber, Vandenberghe, Surcharski and Rhoades, 2002: 569). When employees perceive high organisational support, they perceive that the organisation has fulfilled their need for approval and respect; and it further creates the belief that any extra performance and employees' additional role behaviour, carried out for and on behalf of the organisation, will be recognised and rewarded by the employer (Rhoades, Eisenberger and Armeli, 2001: 828).

An employee's level of perceived organisational support can be heightened with organisational rewards and good working conditions, such as pay, promotions, opportunities for development, and taking part in decision making. Employees have to believe that the organisation's actions are voluntary and not involuntary or as a result of union negotiations, or similar collective agreements (Rhoades and Eisenberger, 2002: 712). Perceived organisational support will strengthen the affective commitment of employees to the organisation and increase the efforts

employees make on behalf of their organisation while low levels of perceived organisational support will reduce the employees' level of organisational commitment (Eisenberger, Cummings, Armeli and Lynch, 1997: 813). Lower levels of organisational commitment have been shown to be significantly related to an employee's intention to emigrate (Miller *et al.*, 2002: 197).

Organisational Commitment

Organisational commitment can be described as an employee's wish to be involved in the organisation. Mowday, Porter and Steers (1979: 234) define organisational commitment as the strength of an employee's identification with the organisation and his or her involvement in the organisation. This identification and involvement in particular organisations are characterised by three factors, namely 1) the individual's identification with the organisational goals and values (identification); 2) the individual having a strong desire to remain employed with the organisation (loyalty); and 3) the willingness to work extra hard on behalf of the organisation, or extend him- or herself for the organisation (involvement) (Camp, 1993: 282). According to Hartman and Hartman (1995: 406), the social integration theory of emigration proposes that when an employee is highly participative in a social institution, the greater the employee's attachment to the society in which the institution functions, and thus the lower his or her intention to emigrate will be.

Organisational commitment can be divided into three components: 1) affective commitment; 2) continuance commitment and 3) normative commitment (Brown, 2003: 177). Meyer and Allen (1991: 67) describe affective commitment as the "employee's emotional bond to, identification with, and involvement with the organisation". This implies that employees with affective commitment continue working for their employers, because they want to. Continuance commitment can be described as employees' understanding of the costs involved when quitting their jobs and seeking new ones. These employees stay in their jobs because they need to stay in them to support their lifestyles (Meyer and Allen, 1991: 79). A feeling of obligation to stay in one's job is referred to as an employee's normative commitment. Research found that employees who are committed to their organisations are less inclined to quit their jobs (Brown, 2003: 78). Therefore, if employees are committed to their organisation, they will be less likely to emigrate, and one would expect a person with a high level of organisational commitment to have a low intention to emigrate (Miller *et al.*, 2002: 18).

Organisations need to make a significant effort to manage these organisational variables to ensure that they will not form part of, or result in, one of the push factors that motivate skilled workers to consider emigration. Organisations will not only be losing their valuable skilled workers but the country's loss of skilled workers will continue to grow.

Intention to emigrate in the higher education sector

When employees experience positive levels of the above-mentioned organisational variables, they are more likely to stay in their jobs and contribute to South Africa's growing economy. But this is not an exclusive determinant of economic growth. According to Beine, Docquier and Rapoport (2001: 277), education has been pointed out to be a significant determinant in the economic growth of a country. In a developing country, such as South Africa, higher education institutions play an essential role in its economic, social, cultural and educational development. The intellectual capital within academic institutions is an invaluable and sought after commodity (Bourdieu, 1986: 255). For this reason, Arnolds and Boshoff (2004: 3) are of the opinion that the mission, vision and objectives of a higher education institution can only be achieved through the academic and support staff of the institution..

Seldin (1991: 18) found that the academic and support personnel's job performance and turnover intention correlated significantly higher with their professional and organisational commitment. Employees who are psychologically committed to their organisations show higher performance, less absenteeism and lower turnover intentions (Rhoades and Eisenberger, 2002: 705). However, Moller (2007: 211) found that job insecurity has also been found as a reason why employees decide to leave the country. The experience by employees of continuous high levels of occupational stress can lead to job dissatisfaction, high turnover levels (as a result of injuries caused by stress), absenteeism and the intention to quit their jobs (Coetzee and Rothmann, 2005: 50). Robbins (2001: 211) confirmed that there exists a strong link between low job satisfaction and absenteeism, and Kreitner and Kinicki (1998: 341) found that there is a significant correlation between job satisfaction and organisational commitment. Thus, employees who are highly positively affective tend to quit their jobs if they experience low job satisfaction (Shaw, 1999: 242). Busch (1998: 140) confirms that satisfied employees tend to stay in their jobs longer than unsatisfied ones. The latter tend to consider alternatives, such as quitting their jobs (Trevor, 2001: 630).

Research by Van Dalen and Henkens (2008: 24) found that an individual's intention to emigrate is a good predictor of future emigration behaviour. Their study in the Netherlands amongst 1 437 participants who have not yet emigrated and 52 participants who had already immigrated to other countries, found that 24% of the participants who stated that they intend to emigrate had actually done it within two years. Van Dalen and Henkens (2008: 25) further found that those individuals who have already emigrated have definite attributes that distinguish them from those participants in the study who have not yet emigrated; they are mostly highly educated, men and have a large number of network contacts abroad.

Thompson (2005) states that when one attempts to determine an employee's motivation and intention to emigrate, all of the above-mentioned variables should be taken into account. These variables are relevant to the higher education institution in which the study is undertaken. If institutional management is aware of their employees' levels of job satisfaction, job insecurity, perceived organisational support, organisational commitment and turnover intention, they can take precautionary steps in order to decrease the turnover and loss of valuable skills in South African higher education institutions. This will contribute to alleviating the national crisis of skills shortages by retaining skilled professionals, which are regularly lost to other countries, and prevent the depletion of the human capital pool in South Africa.

RESEARCH METHODOLOGY

Research design

A cross-sectional research design was used to achieve the aim of the study. This design allowed the researcher to study a group of individuals at one point in time and over a short period (Struwig and Stead, 2001: 211). This research design is cost- and time-effective, and a once-off technique – the participants were not required to take part in a follow-up data collection. There is however disadvantages with regard to a cross-sectional research design. One of these, according to Baltes, Reese and Nesselroade (1988: 342), is the inability to directly assess intra-individual change and inferences to group averages.

Participants

For this study the availability sample ($N=120$) consisted of academic personnel ($N=60$) and support personnel ($N=60$) of a higher education institution in the North West Province – an

adequate size for the purpose of this study (Sekaran, 2000). Table 1 below contains more detailed characteristics of the participants.

Table 1

Characteristics of the Participants (N=120)

Item	Category	Frequency	Percentage
Gender	Male	36	30,0
	Female	84	70,0
Age	21-30	33	27,5
	31-40	32	26,6
	41-50	30	24,7
	51-60	19	15,7
	61-65	5	4,1
Marital Status	Single/widow/widower	15	12,5
	Divorced/separated	8	6,7
	Married/ engaged /relationship	80	66,7
	Remarried	9	7,5
Qualification	High School	28	23,3
	Bachelors	18	15,0
	Honours	19	15,8
	5-7 Year degree	4	3,3
	Masters degree	30	25,0
	Doctoral degree	21	17,5
Personnel	Academic	60	50,0
	Support	60	50,0
Consider Quitting	Disagree	57	47,5
	Somewhat disagree	27	22,5
	Neutral	16	13,3
	Somewhat agree	15	12,5

	Agree	5	4,2
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As indicated in Table 1, the sample consisted predominantly of females (70%). The majority of the respondents (66,7%) indicated that they are engaged, married or in a relationship, while 12,5% indicated that they are single, a widow or widower. Of the participants, 33 (27,5%) were between the ages of 21 and 30 years, and 30 (24,7%) were in the age group between 41 and 50 years. The educational levels of the personnel ranged from Grade 12 (23,3%) to a PhD qualification (17,5%), with a quarter of the participants ($N=30$) holding a Master's degree. In response to the question whether the participants consider quitting their jobs, 57 (47,5%) of the participants disagreed and did not consider quitting their jobs, while 15 (22,5%) somewhat agreed that they did consider quitting their jobs, and five (4,2%) participants considered quitting their jobs.

Research procedure

In this study an availability sample ($N=120$) was taken from a higher education institution in the North West Province. A letter requesting participation and the questionnaires were distributed among academic and support personnel at the higher education institution and the participants were allowed to complete the questionnaires in their own time. The questionnaires were completed anonymously and only relevant biographical information was gathered.

Measuring instruments

The Job Satisfaction, Job Insecurity, Perceived Organizational Support and Organizational Commitment scales, which form part of the Psychological Contracts across Employment Situations Questionnaire (PSYCONES, 2006), were used in this study. The four scales consisted of four items each. The items were arranged along a 5-point Likert-type scale: 1 = Strongly disagree, 2 = Somewhat disagree, 3 = Neutral, 4 = Agree and 5 = Strongly agree.

The four items measuring job satisfaction include: 1) I am not happy with my job; 2) I am often bored with my job; 3) Most days I am enthusiastic about my job; 4) I find enjoyment in my job. Results with the PSYCONES indicated that this scale has a Cronbach's alpha coefficient of 0,82 (PSYCONES, 2006: 183).

Job insecurity was measured by these four items: 5) Chances are, I will soon lose my job; 6) I am sure I can keep my job; 7) I feel insecure about the future of my job; 8) I think I might lose

my job in the near future. In past use this scale achieved a Cronbach's alpha coefficient of 0,82 (PSYCONES, 2006: 183).

The following four items were used to measure perceived organisational support: 9) My organisation really cares about my well-being; 10) My organisation shows very little concern for me; 11) My organisation strongly considers my goals and values; 12) My organisation cares about my opinions. This scale has a Cronbach's alpha coefficient of 0,82 (PSYCONES, 2006: 184).

The last scale measured organisational commitment by means of the following four items: 13) To know that my own work had made a contribution to the good of the organisation would please me; 14) I feel myself to be part of the organisation; 15) In my work, I like to feel that I am making some effort, not just for myself but for the organisation as well; 16) I am quite proud to be able to tell people who it is I work for. This scale indicated a Cronbach's alpha coefficient of 0,72 (PSYCONES, 2006: 184).

The Intention to Emigrate Scale (Miller *et al.*, 2002) was used to measure the participants' intention to emigrate or to leave the country. The scale consists of items relating to patriotism, financial costs associated with emigration, social pressures for and against emigration, perceptions of opportunities abroad, the benefits of emigration, and behavioural factors associated with emigration. The items are arranged along a 5-point Likert-type scale with responses ranging from Strongly disagree (1) to Strongly agree (5). According to the developers of this scale, it achieved a Chronbach alpha coefficient of 0,95 for the 24-item version (Miller *et al.*, 2002: 18).

The following are the items relating to patriotism 1) I have no desire to leave South Africa; 2) I want to help a new democratic South Africa prosper; 3) I am proud to be a South African; 4) I feel very little loyalty to this country; 5) I would miss my country if I emigrated; 6) I talk about this country with pride, and 7) I am positive about the future of South Africa. The next few items are all concerning the financial costs associated with emigration: 8) I would emigrate, despite the financial costs; 9) I would emigrate, even though the Rand is weak; 10) I would sacrifice my standards of living in order to emigrate; 11) I would sacrifice my lifestyle in order to emigrate; and 12) I would like to emigrate but cannot because of the costs involved. Social (family and friends) pressures for and against emigration items include 13) I would like to emigrate but cannot because of family commitments. Perceptions of opportunities abroad are items such as

14) I would emigrate because I believe that my career prospects overseas are good. Further items relating to the benefits of emigrating include the following; 15) I think that my quality of life would be better overseas. Behavioural factors associated with emigration include the items: 21) I frequently discuss emigration with my family; 22) I frequently discuss emigration with my colleagues; 23) I have taken steps towards emigration; and lastly 24) I am very likely to emigrate.

Data analysis

The statistical analysis was carried out with the SPSS programme (SPSS Inc., 17.0). Principal axis factoring was used to reduce the data and extract factors from the 24 items on the Intention to Emigrate Scale. The cut-off value of 0,30 was set for inclusion of an item in the interpretation of a factor. Descriptive statistics (means, standard deviations, skewness, kurtosis and Cronbach's alpha coefficients) were used to analyse the data and describe the study population of the research study.

Pearson product-moment correlation coefficients were used to determine whether there are relationships between the factors. In terms of the statistical significance, the value was set at a 99% confidence interval ($p \leq 0,01$). Effect sizes were established to determine the importance of statistically significant relationships. Effect sizes were also computed to assess the practical significance of relationships in this research study. Cut-off points of $r = 0,10$ (small effect), $r = 0,30$ (medium effect) and $r = 0,50$ (large effect) were set for the practical significance of correlation coefficients (Cohen, 1988). Furthermore, multiple regression analysis was carried out to determine whether the organisational antecedents are significant predictors of an employee's intention to emigrate.

RESULTS

Firstly, principal axis factoring extracted one factor from the 24 items on the Intention to Emigrate Scale. By examining the scree plot and the eigenvalues, it was clear that a one-factor solution is appropriate for this scale. All the items relate to an individual's intention to emigrate. Six items from the scale were deleted because they did not meet the cut-off value of 0,30 that was set for the inclusion of items in the interpretation of a factor. All of these items were related to an individual's patriotism and one item related to the financial implications of emigration. Previous researchers confirm this one-factor solution (Miller et al., 2002). The results from the factor loadings on the Intention to Emigrate scale are represented in Table 2.

Table 2

Factor Loadings on the Intention to Emigrate Scale items

Items	F ₁
1. I have no desire to leave South Africa	-0,62
6. I talk about this country with pride	-0,59
8. I would emigrate, despite the financial costs	0,83
9. I would emigrate, even though the Rand is weak	0,88
10. I would like to emigrate but I cannot because of the costs involved	0,85
11. I would sacrifice my lifestyle in order to emigrate	0,87
13. I would like to emigrate but I cannot because of family commitments	0,60
14. I would emigrate because I believe that my career prospects overseas are good	0,75
15. I think that my quality of life would be better overseas	0,76
16. I find that living in South Africa involves too many drawbacks	0,76
17. I find that living in South Africa involves too many sacrifices	0,75
18. I view emigration as an alternative to living in a country with a high crime rate	0,74
19. I feel forced to emigrate due to conditions within South Africa	0,86
20. I frequently discuss emigration with my family	0,83
21. I frequently discuss emigration with my colleagues	0,79
22. I have taken steps towards emigration	0,78
23. I am very likely to emigrate	0,83

F₁ Intention to Emigrate

Principal component loadings for the items ranged from 0,35 to 0,88. All the remaining items loaded on one factor. None of the loadings on the other factors achieved a value higher than the cut-off value of 0,30 and was therefore not included in the interpretation. The negative scores were transformed into positive scores.

Descriptive statistics, Cronbach's alpha coefficients and correlation coefficients of the Job Satisfaction, Job Insecurity, Perceived Organisational Support and Organisational Commitment scales (PSYCONES, 2006) and the Intention to Emigrate Scale for the employees ($N=120$) of a higher education institution are reported in Table 3.

Table 3

Descriptive Statistics and Cronbach's Alpha Coefficients of the Measuring Instruments

Item	Mean	SD	Skewness	Kurtosis	α
Job satisfaction	3,84	0,93	-0,48	-0,72	0,77
Job insecurity	1,97	0,88	1,08*	0,92	0,76
Perceived organisational support	3,23	1,02	-0,42	-0,51	0,85
Organisational commitment	4,22	0,69	-1,47*	3,93*	0,84
Intention to emigrate	2,50	0,95	0,28	-0,91	0,95

*High skewness or kurtosis

Inspection of Table 3 shows that acceptable Chronbach's alpha coefficients were obtained for all the scales. All the alpha coefficients were higher than the set guideline of $\alpha \geq 0,70$ (Nunnally and Bernstein, 1994). The scores on the job satisfaction and perceived organisational support scales seem to be normally distributed, but the scales measuring job insecurity and organisational commitment seem to have a skew distribution with organisational commitment having a very high kurtosis. The Intention to Emigrate Scale is normally distributed. All the measuring instruments have acceptable levels of internal consistency.

Correlation analyses were carried out to determine the relationships between the organisational antecedents (job satisfaction, job insecurity, perceived organisational support and organisational commitment) and the intention to emigrate. The results are presented below in Table 4.

Table 4

Correlation Coefficients between Job Satisfaction, Job Insecurity, Perceived Organisational Support, Organisational Commitment and Intention to Emigrate

	Intention to emigrate	1	2	3
1. Job satisfaction	-0,17		-	-
2. Job insecurity	-0,04	-0,24		-
3. Perceived organisational support	-0,35 ^{***}	0,31 ^{*++}	-0,11	
4. Organisational commitment	-0,17	0,25	-0,10	0,53 ^{****}

*Correlation is significant at the 0,01 level

+Correlation is practically significant $r = 0,10$ (small effect)

++Correlation is practically significant $r = 0,30$ (medium effect)

+++ Correlation is practically significant $r = 0,50$ (large effect)

Table 4 shows that job satisfaction is practically significantly related to perceived organisational support (medium effect). It further shows that perceived organisational support is negatively correlated with intention to emigrate (medium effect) and positively correlated with organisational commitment (large effect).

A standard multiple regression analysis was carried out to determine whether the organisational antecedents (job satisfaction, job insecurity, perceived organisational support and organisational commitment) are predictors of intention to emigrate. Table 5 summarises the regression analysis of the intention to emigrate construct as dependent variable and the job satisfaction, job insecurity, perceived organisational support and organisational commitment constructs as the independent variables.

Table 5

Multiple Regression Analysis with Job Satisfaction, Job Insecurity, Perceived Organisational Support, Organisational Commitment and Intention to Emigrate variables

Mode		Unstandardise	Standardise	t	p	F	R	R^2	ΔR^2
l		d Coefficients	d						

				Coefficients						
		B	SE	Beta						
1	(Constant)	3,95	0,63		6,30	0,00	4,41	0,37	0,13	0,10
	Job satisfaction	-0,92	0,10	-0,09	-0,95	0,35				
	Job insecurity	-0,10	0,10	-0,10	-1,06	0,29				
	Perceived organisational support	-0,32	0,10	-0,34	-3,24	0,02*				
	Organisational commitment	0,03	0,14	0,02	0,22	0,83				

* $p \leq 0,05$

When job satisfaction, job insecurity, perceived organisational support and organisational commitment were entered into the regression analysis, a significant model was produced ($F = 4,41$; $p \leq 0,05$), accounting for approximately 13% of the variance ($R^2 = 0,13$). It appears that only perceived organisational support ($\beta = -0,32$; $t = -3,24$; $p \leq 0,05$) makes a statistically significant contribution to intention to emigrate.

CONCLUSIONS

This analysis indicated that perceived organisational support was the only organisational antecedent that was significantly related to the intention to emigrate. This indicates that employees who perceive low organisational support will be more likely to have intentions to leave the country than an employee who perceives high organisational support. Rhoades and Eisenberger (2002: 710) state that employees who perceive low organisational support would increase their withdrawal behaviour from the organisation – they intend to leave the organisation or have taken steps to do so. Thus, organisations need to ensure high levels of organisational support. Employees need to feel that they are valued and cared for by the organisation

(Rhoades and Eisenberger, 2002: 712). The organisational support theory suggests that when employees perceive that they are treated favourably by the organisation, their perceived organisational support should increase. Favourable treatment for the employee includes fairness, for example in fairness in the decision making about the allocation and distribution of resources. Employees also perceive supervisor support as favourable treatment. When employees perceive that their supervisor values their contributions and care about their well-being, perceived organisational support will also increase. Furthermore, employees' perceived organisational support could also be increased by rewards and favourable working conditions. This encompasses recognition, pay, promotional opportunities, autonomy, job security and development opportunities (e.g. training) (Armeli, Eisenberger, Fasolo and Lynch, 1998: 290).

Interestingly, in this study job satisfaction, job insecurity and organisational commitment did not contribute to participants' intention to emigrate – contrary to previous research (Miller *et al.*, 2002: 20). An explanation for this finding could be that the participants did not at the time of this study experience above normal levels of job satisfaction, job insecurity and organisational commitment.

Multiple regression analyses were carried out to determine whether the organisational antecedents – job satisfaction, job insecurity, perceived organisational support and organisational commitment – held any predictive value for the intention to emigrate. Again it was found that organisational support was related to the intention to emigrate. It seems that employees who perceive that they don't receive sufficient organisational support are more likely to have intentions to emigrate. According to Eisenberger, Stinglhamber *et al.* (2002: 579), low levels of perceived organisational support are also related to turnover behaviour. Therefore, because of perceived organisational support's proven relationship with both the intention to quit and the intention to emigrate, the conclusion could be drawn that these two variables (intention to quit and intention to emigrate) are related to each other, as Dekker (2006: 178) also already established. The conclusion here would thus be to suggest that turnover intention may act as an intervening variable between perceived organisational support and the intention to emigrate. However, this study indicates a direct relationship between perceived organisational support and intention to emigrate, highlighting the importance of perceived organisational support as a mitigating factor in the intention to emigrate.

Perceived organisational commitment was found to be strongly related to organisational commitment. Organisations should focus on initiatives that are aimed at increasing employee's commitment to the organisation. According to Rhoades, Eisenberger and Armeli (2001: 830), employees that are affectively committed to their organisation have a sense of citizenship in their organisation; this has a positive effect on their participation in organisational related activities and very importantly, increases their aspirations to stay employed with the organisation.

RECOMMENDATIONS

It has now been determined that a relationship between perceived organisational support and intention to emigrate exists in the sample that was used. It is recommended that future studies aim at investigating these relationships to establish whether there might be any other organisational variables that could have an influence on employees' intention to leave the country. A further recommendation is that moderating factors are taken into account when determining employees' intention to emigrate. Such moderating factors could include personality characteristics, social support and networks and general health. A study by Miller *et al.* (2002: 20) interestingly found that employees who had family or friends that have immigrated to another country consider emigration much more than those employees who do not have family or friends that have emigrated. Other moderating factors can be the employees' personality traits. An example of such a moderating factor is an employee's locus of control. Locus of control has been identified as a significant personal level predictor of the organisation and the country (Rosenblott and Sheaffer, 2001: 410).

It is further recommended that more demographic variables, such as race, ethnic background and language be taken into account when determining individuals' intention to emigrate. Studies have shown that there are differences in individuals' race in terms of intention to emigrate; it was found that whites are most likely to consider emigration. For example, according to Waller (2006: 1) a survey carried out by the Southern African Migration Project (SAMP) found that the employees who emigrate are mostly white males. The country's history of Apartheid is responsible for this phenomenon: the previously disadvantaged groups in South Africa did not have the same opportunity as the white population to attend superior training or educational institutions (Waller, 2006: 1). However, nowadays more and more people have access to higher education institutions and black and coloured South Africans could also become part of the brain drain statistics; and according to an article in the Cape Times (2008: 1)

the number of black and coloured South Africans that are now also considering emigration has seen a significant rise.

Although this study, and that of the scales' developers (Miller *et al.*, 2002) confirm a single intention to emigrate factor, it may be fruitful to refine the scale and get to a better understanding of how different considerations (family, finances, etc.) influence the intention to emigrate.

Lastly it is recommended that further investigations should be undertaken to determine other organisational variables that might influence employees' decision or motivate them to emigrate, factors such as organisational policies and procedures and career development opportunities. In a study by Bornman (2005: 390) it was found that the emigration of white South Africans were partly motivated by affirmative action policies: the workers feel restricted and do not see a future of opportunities and possibilities in their organisation (Fitzpatrick, 2008: 1; Bhorat *et al.*, 2002, 52).

The findings made in this study should be of interest to researchers and managers in the organisational context as it may contribute to the development and implementation of initiatives that organisations initiate to attempt to retain their highly skilled employees. Research on the relationship between work variables and employees' intention to emigrate has long been ignored and it is time that it is investigated. This study could be used to determine whether an organisation's employees intend to emigrate and whether there are organisational antecedents that influence and/or predict their intention to emigrate. It could enable organisations to identify and retain their valuable employees who potentially could emigrate. Results obtained by this study confirm that employees' intention to emigrate has implications for the organisations in which they currently find themselves. Through the further identification of organisational antecedents that are related to intention to emigrate, organisations can start by managing those organisational antecedents so that the employee and organisation can once again create a favourable working environment for both parties. Retaining these employees with scarce skills will in turn help the country in its fight against the unprecedented brain drain it is experiencing.

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FACTORS AFFECTING PROSPECTIVE STUDENTS' CHOICE WHEN CHOOSING A HIGHER EDUCATION INSTITUTION IN SOUTH AFRICA

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Key words: choice factors, prospective students, Higher Education Institutions

Abstract

The aim of this paper is to determine the factors that affect prospective students' choice when choosing a university in South Africa. The second objective is to determine if there are any differences or similarities between suggested choice factors found in literature relating to Higher Education. The focus is only on that of the high school leaver, thus the prospective student that is considering a Higher Education (HE institution) to further his/her education. Based on a survey of 2750 grade 12 scholars from 38 schools, findings indicated the top three choice factors as: finding a job after completing the qualification, that qualifications should be internationally recognized and that safety is important. An open-ended question also revealed location, reputation and availability of courses as important choice factors. Apart from 'safety', 'cultural aspects' and 'international recognition' that are ranked higher by South African students, choice factor similarities across literature were found.

1. Introduction

Increased competition in the Higher Education (HE) landscape (Veloutsou, Lewis & Paton, 2004: 160; Opuka, Hultman & Saheli-Sangari, 2008:138) has made HE institutions more receptive to marketing (Kotler & Fox, 1985:8-10; Hemsley-Brown & Oplatka, 2006:316;

Harrison-Walker, 2009:103). Universities compete for students (Maringe, 2006:466; Freeman & Thomas, 2005:154) and students can choose from a vast number and variety of institutions (Veloutsou et al., 2004:160; Opuka et al., 2008:138; Ivy, 2008:288).

To attract students in this increasing competitive HE landscape challenges university marketers to gain an understanding of these recruitment markets (Maringe, 2006:466). Prugsamatz, Pentecost & Ofstad (2006:136) argue that education marketers should understand a student's expectations prior to the choice of university as it could provide a better insight for increasing enrolment, while Maringe (2006) argues that it is crucial to understand the choice factors that influence the student's decision making.

On the one hand it is important *to the university* knowing the choice factors because it is central to developing institutional positioning (Maringe, 2006:469; Harrison-Walker, 2009:104). On the other hand, the positioning decision "can be central to the customer's perception and choice decisions (Aaker & Shansby, 1982:56)" and choice is difficult when students are not able to experience the educational process prior to making a decision to attend a university (Nguyen & LeBlanc, 2001). A positioning decision can further help students to distinguish an institution from another (Lowry & Owens, 2001:28).

Developing institutional positioning is not the only benefit that could be gained from understanding student's decision making and the choice factors influencing the decision making. Understanding HE institutional choice factors can provide universities with the market intelligence to improve their portfolios and reputations, and facilitate strategic benchmarking between institutions (Briggs, 2006:707) as well as guiding recruitment strategies (Anderson, 1999:128).

Brown et al. (2009:311) and Veloutsou et al. (2004:260) argue that there are three segments of students that universities seek to recruit: school leavers, mature and international students. This study focuses on arguably the largest and most sustainable segment (Veloustou et al., 2005), the school leavers as the prospective students. Although a South African study was conducted in 2008 to determine choice factors when choosing a university, the sample comprised solely on first year students in one faculty. This study only focuses on prospective students, grade 12 scholars that are considering to furthering their education at a HE institution.

Prospective students' choice is perceived as having three stages: predisposition, search, and choice (Hoyt & Brown, 1999:1), the focus of this paper is primarily in the choice phase. The researcher is particularly interested in the factors that prospective students consider and 'rank' as having a significant impact on choice when choosing a HE institution to further their education in South Africa.

2. Problem investigated

Universities are competing for students (Freeman & Thomas, 2005:154; Maringe, 2006:466) and with the increasing threat of new "degree-awarding institutions" in the market place (Brown, Varley & Pal, 2009:311) coupled with the already existing number and variety of institutions, prospective students have the luxury of choice (Ivy, 2008:288; Briggs, 2006:707; Veloutsou et al., 2004:160).

Prospective students are not passive choosers (Petruzellis & Romanazzi, 2010:149). They are rigorous in the 'information search' and 'evaluation of alternatives' stages of the decision-making process (Greenbank, 2009:260) and thus better informed (Briggs, 2006:707). They are also more mobile and able to make judgments about a range of potential preferred HE suppliers to home and abroad (Briggs, 2006:707).

Lorange (2005:786) argues that the HE landscape has changed from a supply-driven focus, to a demand-driven focus. Prospective students are becoming more demanding with the universities they choose (Petruzellis & Romanazzim, 2010:141). They will decide what they want, what they demand, based on their assessment of their needs (Lorange, 2005:786). It is therefore important for HE institutions to understand what students desire and expect from the institution they choose to better market to them (Petruzellis & Romanazzi, 2010:141).

A comprehensive set of choice factors might provide a more accurate picture of the characteristics students perceive important in HE institution selection (Briggs, 2006:709). These choice factors can be used to better position the institution (Weisse, 2008:2; Niculescu, 2006; Maringe, 2006:469 and Harrison-Walker, 2009:104), but also to develop strategies to enhance competitiveness and to reach the student market (Weisse, 2008:10). Understanding choice factors can further be used for 'informed marketing' that would not just influence the decision-making process but might positively influence the choices prospective students will make (Briggs, 2006:707).

3. Research objective

3.1. Primary objective

To determine prospective students' (grade 12 scholars) choice factors and the relative importance of these choice factors when considering a HE institution in South Africa to further their education.

3.2. Secondary objectives

To determine the differences and similarities of existing suggested choice factors evident in the literature to this study's finding.

4. Literature review

The Higher Education landscape

There is a realization that student recruitment has become much more competitive (Read, Higgs & Taylor, 2005:31). The recruitment market has widened and universities not only compete on national level but they also compete to gain a larger share of the international market (Hemsley-Brown & Oplatka, 2010:204; Opoku et al., 2008:125, Yamamoto, 2006:559). A changing HE environment has resulted in universities having to compete with new competitors (Cubillo, Sanchez & Cervino, 2006:101) such as the newly appeared private institutions, non-university competitors in the form of industry and non-university educators (Veloutsou et al., 2004:160; Harrison-Walker, 2009:103) and new entrants such as distance-learning and internet-based courses (Niculescu, 2006:725).

The increasing number of institutions nationally and internationally (Veloutsou, 2004:160) also leave students with a wider variety of universities from which to choose (Ivy, 2008:288). Widening educational access in some countries (Bathmaker & Thomas, 2009) have opened new markets (Prugsamatz et al., 2006), and students with new and more alternative choices (Veloutsou et al., 2004:161). Greater choice though, significantly increases the complexity of the decision making process (Drummond, 2004:317 and Briggs & Wilson, 2007:58), as HE customers do not necessarily need more choice; they want exactly what they want, where, when and how they want it (Drummond, 2004:317). Choice is also difficult when students are not able to experience the educational process prior to making a decision to attend a university (Nguyen & LeBlanc, 2001 and Moogan, Baron and Harris, 1999:212).

In South Africa, the HE sector is facing many new challenges such as the recently transformation of Technikons into Universities of Technology as well as the mergers of HE institutions (Weisse, 2008:1; Ivy, 2001). These changes increase competition and complicate choice for prospective students, as they do not always understand what a University of Technology or newly merged institution stand for. Choice is further complicated as South African prospective students can choose from 23 public institutions (Department of Education(a), 2010), not to mention the 'other' private education service providers, of which there have been a noticeable increase over the last few years (Weisse, 2008:1). South African students also have the choice of international institutions, as students in general are no longer restricted by national boundaries (Freeman & Thomas, 2005:153).

In the context of increasing competition for home-based and overseas students, HE institutions now recognize that they need to market themselves in a climate of international competition (Hemsley-Brown & Oplatka, 2006:316, Harrison-Walker, 2009:103). Universities realize the importance of student recruitment (Ivy, 2008:288) and need to market themselves more explicitly (Hemsley-Brown & Oplatka, 2010:204). Russell (2005:73) argue that it is important for HE institutions to use marketing techniques and that students expect institutions to advertise and create an awareness of their offerings.

Lowry & Owens (2001:28) argue that 'positioning a university' so that it has a distinct position will help students to make a realistic analysis of the positive and negative aspects of the offering. Positioning can be central to customers' perception and choice decisions (Aaker & Shansby, 1982:56), because a distinct position conveys to prospective students what it is and what it stands for. If the prospective student perceives the university's positioning to emanate the values that are congruent with his/her values, the student is reassured that he/she has made the correct selection decision (Lowry & Owens, 2001:28).

Thus clear positioning of a university can assist students in their choice of an institution (Veloutsou et al., 2004:160). Perceptions are important as positioning is built around the specific perceptions of consumers, and this articulates an organizations' perceptual location relative to other organisations (Ho & Hung, 2008:330).

The marketing literature establishes that brand perceptions (attitudes and preferences) are strongly associated with brand choices as well as with market share (Gosh & Chakraborty,

2004:295). But what perceptions do prospective students value when choosing a university? Is it the perception of the reputation of the institution, the quality of the degree, the perceived image? Thus, what do students perceive as important factors that they will consider when choosing a university?

Maringe (2006:466) argue that to have an understanding of universities' recruitment markets, is to have a *clear grasp of the choice* and decision making process of intending applicants. Bennion (1987) study of positioning in basic industries revealed that the positioning dimensions/factors unearthed in his study were also consistent with the choice criteria for that specific industry. He argued that firms must determine the basic attributes that affect buyers' *choice*, as these attributes form the bases for positioning. The alternative bases (dimensions/factors) will be used to construct its positioning strategy.

Prospective students' choice

Choice is an iterative, complex and multidimensional concept (Petruzellis & Romanazzi, 2010:141; Brown et al., 2009). It involves a wide range of variables and is influenced by many factors (Briggs & Wilson, 2007:58). The choice of which HE institution to attend, is influenced by the background and current characteristics of the prospective student, such as academic achievement at school, life and school experience (Briggs & Wilson, 2007:58; Chapman, 1981:503). Significant persons, such as friends, parents or teachers can sway decisions, as can careers officers (Moogan & Baron, 2003:273). The fixed characteristics of the college, and the institution's own efforts to communicate with prospective students can also affect students' HE choice (Chapman, 1981:503).

Moogan & Baron (2003:272) argue that knowing how prospective students make their decisions is important for competing and surviving. To reduce the complexity of the decision-making process requires the HE institutions to understand which information is truly important to the applicant. There is an increasing recognition of the need to understand the factors that are 'most' influential in selecting a university (Briggs & Wilson, 2007:59), the primary key characteristics that are important to prospective consumers (Darling, 2001:210).

There is general agreement that reputation of the institution (Petruzellis, 2010:141; Mazzarol & Soutar, 2002; Russell, 2005:66; Brown et al., 2009: 314; Moogan & Baron, 2003:273) and location of the institution are of prime importance when choosing a HE institution (Petruzellis,

2010:141; Russell, 2005:73; Brown et al., 2009: 314; Moogan & Baron, 2003:273; Moogan et al., 1999:221 and Anderson, 1999:129).

Briggs (2006:717) found that academic reputation is of high importance in student choice, however, the more established universities may survive on their perceived reputations while newer universities are faced with developing reputations in accelerated time-frames. There is agreement that reputation and location influence prospective students' choice, however, Briggs (2006:717) add 'distance from home' as one of the top three factors that influence HE choice. The other constructs of student choice were made up of the institution's reputation, institution's features, known information, demographics and employment possibilities.

Other authors also (Moogan & Baron, 2003:273) and Veloutsou et al., 2004:161) highlighted employment opportunities or career enhancement as criteria which prospective students seem to use in deciding which HE institution to attend. Individuals do consider economic motives. Mostly, the labour market outcome prospective students may expect from education play a role in their choice (Lauer, 2002:185). HE is increasingly more seen as a place for career preparation and not a place to pursue "the love for scholarship" (Maringe, 2006:477). A HE degree represents one more chance to find a job, so great expectations are placed in the role of the HE institution as a link with the job market (Petruzzellis et al., 2006: 354 & 358).

Hoyt & Brown's study (1999:5) across several faculties also found that 'job outcomes' to be one of the top nine factors that influence choice. The other eight factors included: academic reputation, location, quality of instruction, availability of programme, quality of faculty, costs, reputable programme and financial aid. The next most important factors were: variety of courses offered, size of institution, surrounding community, availability of graduate programmes, student employment opportunities, quality of social life, class size, graduate school outcomes, extracurricular programmes, friendly personal service, affiliation, admission requirements, and attractiveness of campus facilities.

Maringe (2006) found the critical important choice factors to be the overall reputation of the institution and staff credentials. Institutional prominence maintained a fairly high profile in prospective students' decision-making. Following these factors were the programme factors, field of study and details of course. Price elements included considerations students gave to regional economic job market issues.

Price (Veloutsou et al., 2004:161; Ivy, 2001), place, programme (course), and prominence factors seemed to be the some of the most important factors when determining students' choice of university for their HE study (Ivy, 2001). Briggs & Wilson (2007: 68) argue that cost is less important than other factors when choosing a HE institution.

The importance of the perceived overall academic quality is also unquestionable (Chapman, 1986). Mazzarol and Soutar (2002) found that among quality and reputation of the institution, the recognition of the institution's qualifications in their own country is just as important. Russell (2005:66) argue that it is not an institution's actual quality that guide students decisions, but its prestige, or reputation for quality, because it is the university's perceived excellence which guide the decisions of prospective students.

Veloutsou et al. (2004:161) agree that applicants consider reputation and location, but argue that attributes such as the institutions infrastructure (the library facilities, classrooms, computers, security), costs associated with the study, future career prospects and opportunities, and the quality of life during their studies should also be considered.

A South African study (Weisse, 2008) conducted with first year students, indicated that quality of teaching, employment prospects and campus safety and security of HE were the three most important factors influencing a student's selection process. These were followed by academic facilities, international links, language policies, the image of the institution, flexible study modes, academic reputation and wide choice of subjects/courses to form the top 10 choice factors.

Conclusion

Prospective students often rely on inaccurate information to form images of HE institutions, and these images will affect the likelihood of people attending or recommending institutions to others (Russell, 2005:66). It is the responsibility of the university to understand the factors that influence students' HE institution choice.

There exists a well-defined body of evidence on student choice (Briggs, 2006:709), however it is rather limited in South Africa (Weisse, 2008)

5. Research Methodology and Design

In this section, the researcher will explain why mainly a descriptive research design was applied, the population and sampling method; and data collection instruments, sources, and procedures are also discussed. Lastly, the data analysis procedure will be explained.

5.1. Research Design and Plan

A research design is a framework or blueprint for conducting a marketing research project (Malhotra & Birks, 2005:58), the basic plan that guides the data collection and analysis phases of the research project. It defines the structure and specifies the type of information that will be collected, the sources of data and the data collection procedure (Kinnear & Taylor, 1996:129). It is classified into three traditional categories, exploratory, descriptive and causal (Burns & Bush, 2006:116).

The researcher employed a descriptive research design, specifically the survey approach, using a paper-based questionnaire. Descriptive research has its major objective of describing something, mostly the market characteristics or functions (Malhotra, 2007:181). According Kinnear and Taylor (1996:131), descriptive research is appropriate when the characteristics of marketing phenomena and the frequency of occurrence can be determined.

The main goal was to determine the prospective students' choice factors and their relative importance when choosing a university to further their education.

5.2. Population

Population is commonly used to define everyone of interest who could possibly be included in a research study. In this case, the population comprised of prospective students (grade 12 scholars) that are considering to furthering their studies after school (Psychographic profiles) (Kolb, 2008:178).

5.3. Research method

Self-administered, semi-structured questionnaires were distributed during August and September 2009 to prospective students, thus grade 12 scholars. For practical reasons, questionnaires were only sent to Gauteng scholars of university 'feeder' schools.

A questionnaire is a formalised set of questions for obtaining information from respondents (Malhotra, 2007:299). A large proportion of the questionnaire consisted of structured questions that specified the set of response alternatives and the response format. Closed questions were included to get the respondents to express their opinions or attitudes by choosing rating points on a scale. It was also used to obtain information on certain aspects of an issue and therefore no time was wasted in obtaining more information than needed (The International Development Research Centre, 2010). A few unstructured questions were also included to determine general attitudes and opinions that scholars have of universities.

A paper-based questionnaire was distributed because of the practicality in reaching a large sample group. Interviews would have been too costly and time consuming.

5.4. Sample, sample unit, sample method and sample size

A *sample* is a “subset of the population that suitably represents that entire group (Burns & Bush, 2006: 330).” In this case, the sample consisted of all Grade 12 scholars that can further their education at a HE institution.

The *sampling unit* was the Gauteng ‘feeder’ schools. The term ‘feeder’ means, the schools with the highest probability of passing grade 12 scholars that can further their education at a HE institution.

A quota sampling method was employed, because the 'non-probability sampling technique is used that is a two-stage restricted judgmental sampling (Malhotra, 2007:344). The first stage consisted of developing control categories or quotas of population elements. The control characteristics in this case were:

- that the scholar had to be in grade 12,
- had to pass with ‘exemption’/know that he/she had good enough marks to be accepted at a HE institution in South Africa
- the scholar had to be in one of Gauteng’s ‘feeder’ schools.

The researcher further applied the judgmental sampling method, in which “the population elements were selected based on the judgment of the researcher (Malhotra, 2007:343).” The researcher used the expertise of the University of Johannesburg’s Student Recruitment and Marketing team to choose the Gauteng Schools that should be targeted, based on schools with

good reputations, excellent grade 12 pass rates and delivering the highest number of school leavers that will probably consider to furthering their education at a HE institution in South Africa.

When a school was approached, ALL grade 12 scholars were asked to complete the questionnaire, thus a *census* was used for that particular school's grade 12 scholars. However, the researcher is aware that the teacher(s) had control over who participated in the study.

The 'top 50' feeder schools in Gauteng were approached; however 2 750 useable questionnaires were received from 38 'government' schools. A further 250 questionnaires were received from three private schools. These three private schools' results were not included in this study, as three private schools are not representative of the 'private school' population in Gauteng.

The 38 'government' schools comprised of 20 Afrikaans schools and 18 English schools. The Department of Education lists 748 top performing schools in Gauteng (Department of Education, 2010). Thus 5% of the sample was reached, although it should be mentioned that universities would not be interested in all 748 schools, as it is not possible to reach all these schools effectively. It should be noted that only 97 out of the 748 listed 'top schools' had a 100% grade 12 pass rate and in total 200 schools had a pass rate between 100% and 95% (Department of Education, 2010). In most cases, HE institutions are interested in the most capable school leaver and thus in the schools that have the best grade 12 scholars with high grades.

Fieldwork and Analyses

Primary data were directly obtained from research participants (Kolb, 2008:24) through questionnaires that were distributed (quantitative) to grade 12 scholars. Identified Gauteng schools were visited in person by qualified student marketers who already had relationships with the identified schools.

An inferential analysis process was followed as statistical procedures have been used to generalise the quantitative results obtained of the sample from completed questionnaires to make judgments about the whole population (Burns & Bush, 2006:426). The statistical procedures allowed the researcher to draw conclusion about the 'prospective student'

population that allowed the researcher to 'answer' the research objectives stated earlier in this document.

Reviewing quantitative data (collected from the questionnaires), including its validity, completeness and accuracy and coding open ended questions preceded the actual inferential analysis process. All respondents' 'answers' were entered into the software programme, in this case SPSS Family version 15. An external provider coded and entered data in an electronic file, where upon it was sent to the University of Johannesburg's Statkon Department to verify again, before analysing. Frequency of responses was determined as well as frequency of one or more variables were cross-tabulated. The researcher also determined how widely the participants' responses varied from each other, so dispersion was examined by calculating standard deviation, range and variance. Statistical tests were performed to determine if differences in the data were due to chance or random error, or if such a difference had a statistical significance. Statistical testing included Chi-square, R-tests and t-tests (Kolb, 2008:249).

6. Results/Findings

6.1. General biographical findings:

More females (59%) than males (41%) answered the questionnaire.

An interesting phenomenon is that it seems that some Afrikaans speaking scholars are sent to English schools. From the 2750 respondents that indicated they are considering to furthering their education, 1600 were Afrikaans speaking and only 650 were English speaking. A large number of respondents (270) that indicated that they are attending English schools home language was Afrikaans.

The remaining 500 respondents comprised mostly out of Nguni and Sotho speaking respondents. Although these "African" languages are underrepresented of Gauteng's prospective student population, the top 10 choice factors for this group were very similar to the Afrikaans and English speaking prospective students. Although there was 'agreement' about the top 10 choice factors, the relative importance and ranking of these differ slightly from the other language groups.

6.2. The Top 10 choice factors for choosing a HE institution in South Africa:

Respondents were asked how significant they would rate a list containing 27 factors in affecting their decision when choosing a HE institution (university/university of technology) to further their education. They had to indicate their response using a 7-point response scale, where 1 indicated NO significance and 7 indicated VERY significant.

The results of this study indicated that finding a job after completing respondents' qualification as the top factor (mean value 6.56) that will affect their decision when choosing a HE institution to further their education. This was closely followed by qualifications that should be internationally recognized (2) and a safe environment (3). The following seven reasons were: lecturers that should be knowledgeable experts (4), offering a world-class-education (5), feeling at home at the chosen institution (6), excellent library and associated resources (7), qualifications that should be reputable (8), racism that should be non existing at the institution (9) and that the respondents' culture should be respected (10) (see figure 1).

Figure 1. The Top 10 deciding factors that are considered when choosing a HE institution to further education:

Ranking	Factors that are considered when choosing a university	Mean
1	I should be able to find a job after completing my qualification	6.56
2	Its qualifications should be internationally recognized	6.44
3	It should offer a safe environment	6.35
4	Its lecturers should be knowledgeable experts	6.32
5	It should offer a world-class education	6.27
6	I should feel at home at the chosen institution	6.19
7	Excellent library and associated resources	6.12
8	Its qualifications should be reputable	6.06
9	Racism should be non existing	6.06
10	My culture should be respected	6.05

Finding a job after completing the qualification

It was also evident from the literature that job opportunities or job prospects (Briggs, 2006:717; Moogan & Baron, 2003:273; Veloutsou et al, 2004:161; Lauer, 2002:185; Maringe, 2006:477; Petruzzellis et al, 2006: 354 & 358; Hoyt & Brown's study, 1999:5) was an important determinant affecting prospective students' decision when choosing a HE institution to further

their education. Moogan et al.'s (1999:219) study revealed that although it was not rated as a choice factor, that prospective students listed the main reason for attending a HE institution was to get a decent and well paid job. Weisse's (2008) South African study under first year students in one faculty, indicated 'employment prospects' as the 2nd most important choice factor, but her study revealed 'quality of teaching' as the most important choice factor when choosing a HE institution.

Reputation

Interestingly enough, although the literature revealed that the institution's reputation (Petruzellis, 2010:141; Mazzarol & Soutar, 2002; Russell, 2005:66; Brown et al., 2009: 314; Moogan & Baron, 2003:273) is of prime importance when choosing a HE institution, this prospective student survey's results revealed another 'angle' to the meaning of reputation.

The results of this study indicated that the second most significant factor affecting prospective students' decision when choosing a HE institution is that the institution's qualifications should be internationally recognized (mean value 6.44). It could be argued that an institution must have some sort of 'good' reputation; otherwise the qualifications would not be internationally recognized. The other question that these results raise, is whether a degree from a HE institution with a good reputation of the institution will increase the possibility of a student to get a job after graduation?

It should further be noted, that offering a world-class education (mean value 6.27) and that qualifications should be reputable (mean value 6.06), were all ranked in the top 10 significant choice factors. That the institution should be a reputable institution in South Africa (mean value 5.93) was ranked as the 13th most significant factor affection decision making (see *figure 3*).

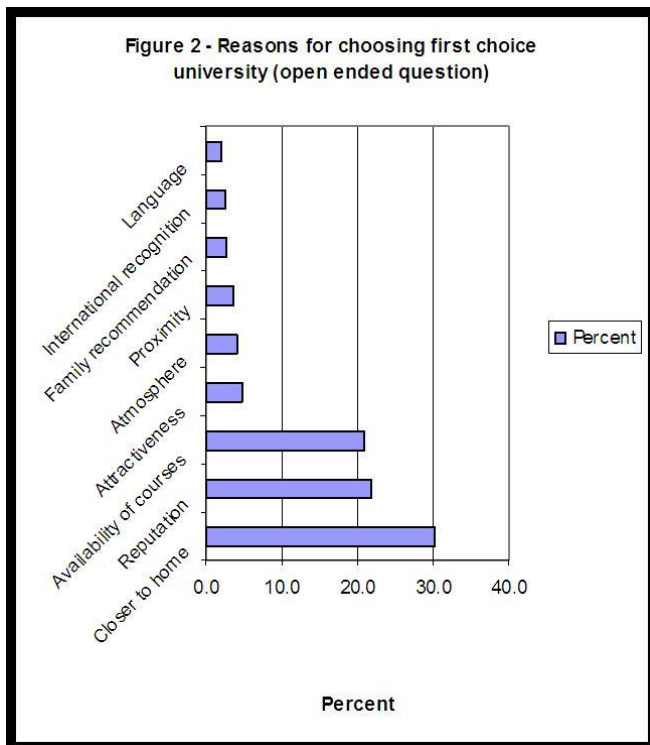
Location

Many authors (Petruzellis, 2010:141; Russell, 2005:73; Brown et al., 2009: 314; Moogan & Baron, 2003:273, Moogan et al., 1999:221) stated that location of the institution is of prime importance when choosing a HE institution. It is also evident from this study that South African students do rate location as a significant choice factor.

Although the closed statement questions haven't revealed 'location' as under the top 3 choice factors, the open question earlier in the questionnaire did. Respondents were asked to write

down their top three reasons for why they have chosen their mentioned first choice university. The main reasons were that the particular chosen university was closer to home (30%), had a good reputation (22%) and the availability of courses (21%). Attractiveness, Atmosphere, Proximity (near shopping centre, the beach, and beautiful surroundings), family recommendation, international recognition and language (tuition) were also mentioned in the open-ended question. (See figure 2 for these results.)

It was surprising that the open question earlier in the questionnaire revealed a different outcome to the closed question regarding 'location' as a choice factor. In the closed question importance of 'location' was ranked as the 17th (see figure 3) most important choice factor. It should though be noted that the closed question's 'location' statement read: "The campus' location is important" that scored a mean value of 5.68, compared to the open question where prospective students wrote their own answers and 30% chose the words that their first choice institution should be "closer to home". Prospective students could have interpreted the statement in the closed question differently, i.e. that 'location is important' meaning where it is situated relating to other activities in the surrounding area, how easy it is to get to the campus, the number or type of shopping centers in the area etc. It is suggested that future research include a statement 'It is closer to home' in the closed options.



Safe Environment

This study revealed that prospective South African students are concerned about safety (mean value 6.35). 'Campus safety and security' was also Weisse's (2008) third most important choice factor. Veloutsou et al. (2004:161) also mentioned 'security' as one of the choice factors, however limited evidence was found that 'safety' was ranked so high, or even mentioned at all in other available published literature.

Quality of instruction/teaching & academic quality

Respondents indicated that lecturers should be knowledgeable experts (mean value 6.32), confirming the literature findings of Hoyt & Brown (1999:5), Drewes & Michael (2006:799) and Weisse's (2008) South African study. Could it be argued that excellent library and associated facilities could play a role in how the quality of instruction and academic quality is perceived? Up to date databases and computer labs, but to mention only a couple of 'facility' examples could be an indication of academic quality, or at least influence academic quality.

That academic quality is a significant choice factor, is unquestionable (Chapman, 1986). This study revealed that institutions' 'ability' to offer a world-class education and reputable qualifications are affecting a prospective student's decision to attend a HE institution. In the literature, Mazzarol and Soutar (2002) confirm this notion that among quality and reputation of the institution, the recognition of the institution's qualifications in their own country is just as important.

Cultural aspects and feeling at home

There is limited evidence in the literature about prospective students' views on how 'cultural' aspects of a HE institution could influence or affect their HE institution choice. This study revealed that 'cultural issues' are definitely on their mind when considering a HE institution. Respondents indicated that they want to feel at home (mean value 6.19), that their culture should be respected (mean value 6.05) and that racism should be non existing (mean value 6.06). All three these reasons were part of the top ten choice factors.

Further evidence that this might be important, is that 'culture' comes up again in the top 11 to 20 choice factors: "I should be able to express my culture (mean value 5.8), all population groups are represented on the campus (mean value 5.23) (see figure 3.)".

Figure 3. The Top 11 to 27 deciding factors that are considered when choosing a HE institution to further education:

Ranking	Factors that are considered when choosing a university	Mean
11	Its buildings and grounds should be well maintained	6.03
12	It should have enabling facilities	5.95
13	It should be a reputable institution (in South Africa)	5.93
14	It should be known as a FIRST rate university	5.8
15	I should be able to express my culture	5.8
16	My parents' perception of the institution should be positive	5.75
17	The campus' location is important	5.68
18	My teachers' perception of the institution should be positive	5.64
19	The campus(es) should look "attractive"	5.42
20	All population groups are represented on the campus	5.23
21	Sport teams should have a good reputation	5.03
22	My friends' perception of the institution should be positive	5.02
23	Its admission requirements should be high	4.97
24	It should be a "hip" environment	4.96
25	Others from my cultural group should be present on campus	4.82
26	I should be taught in English	4.75
27	My friends should also consider the institution to further their education	4.6

7. Conclusion

In an increasingly competitive HE environment, the quest for attracting new, the best and most capable students is on. HE institutions have to become better at marketing themselves, because of proliferation in the market and with new entrants in the market, prospective students have choice. HE institutions should get to know their recruitment markets and start addressing their needs. Understanding how prospective students choose a HE institution and what factors will affect these students' choices when choosing a university can help in better qualifying the institutional positioning strategy. Selected choice factors can be used to develop a clear and distinct position in the prospective student's mind that will make the university stand apart from other universities.

Understanding choice factors and how it affect HE institution choice, can also provide HE institutions with information that will assist them to market themselves more effectively to their chosen target market and to attract the 'capable' student. This information can guide HE institutions' recruitment strategies, improve reputations and facilitate strategic benchmarking between institutions.

It is evident that South African prospective students are facing similar but also different issues when considering a HE institution to further their education. Although reputation and location of the chosen institution play a significant role in both this study and the literature when choosing a HE institution; South Africans indicated the importance of finding a job after graduation and the role that safety plays in this decision. International recognition of qualifications also ranked very high, and although mentioned in the literature, this South African study revealed a much higher significance attached to this factor as a choice factor. It raises the question whether South African prospective students are considering working overseas after completing their qualification?

Another factor that received limited attention in 'HE choice factor literature' is the role that culture plays. Respondents indicated three 'cultural factors' as part of their top 10 choice factors. These factors are: that they wanted to feel at home at the chosen institution, that racism should be non existing and that their culture should be respected.

Other important choice factors that HE marketers could consider in their marketing efforts are: lecturers should be knowledgeable experts, institution should offer world-class education, the qualifications should be reputable, excellent library and associated resources and the role that culture plays (as mentioned in the above paragraph).

South African HE institutions should consider that student choice is subject to multiple influences, and that reputation and location alone, although very important, could not be the only message that should be used as a positioning statement or in other marketing messages.

There is an increased recognition of the need to understand the factors that are 'most' influential in selecting a HE institution for each particular market, and it is suggested that South African institutions should use this study as a basis to conduct their own research for their target groups.

8. Implications for managers/recommendations

Although it was motivated in this paper why the sole focus was on the prospective student and the choice factors that affect HE choice, it should be noted that students are not the sole consumers in the HE system. It would be wrong just to focus on the prospective student. HE institutions must not seek to serve only the interest of prospective students to the exclusion of other stakeholder groups (Eagly & Brennan, 2007).

The literature review as well as this study confirmed the importance of reputation in student choice; however, Briggs (2006:717) warned that the more established universities are, the better they may survive on their perceived reputations while newer universities are faced with developing reputations in accelerated time-frames. This has implications for the 'newer' universities in South Africa, for example the 'traditional universities' that merged with the 'technikons' to form universities of technology. These universities of technology will have to work much harder at building a positive reputation with prospective students.

This study didn't indicate cost to be playing a big role when deciding which university to choose, however, alarmingly about 50% of respondents said they will rely on bursaries (company and university) or loans (NSFAS and banks) to pay for their studies. Are HE institutions in South Africa providing enough financial assistance to attract these students?

Suggestions for further research:

It is suggested that 'factors' that should be further investigated as affecting HE institution choice, is 'institutional prominence' (Maringe, 2006), 'prestige' (Russell, 2005:66) and the perceived value that prospective students will gain from choosing a specific institution. The other question that should be addressed, is whether a degree from a HE institution with a good reputation of the institution will increase the possibility of a student to get a job after graduation in South Africa?

It would also be interesting to investigate how these choice factors could be used to position South African HE institutions and there is a need for a 'choice model' with key choice constructs and sub-constructs that could assist HE marketers when determining the most important and influential factors for their target groups.

Further analyses are suggested to quantify the relative choice factors (variables) and respective trade-offs (Moogan et al., 1999:226) which students would be prepared to make while considering their decisions. Conjoint analysis techniques could be used to assess which criteria have the most influence when evaluating the alternatives.

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AN INVESTIGATION INTO THE ENTREPRENEURIAL INTENT OF RURAL UNIVERSITY STUDENTS IN THE LIMPOPO PROVINCE

ABSTRACT

This paper investigates the entrepreneurial intent of 203 final year commerce students in a rural university in the Limpopo province based on the **theory of planned behaviour (TPB)**. The objectives of the study were to test whether the TPB can help explain the entrepreneurial intention of rural university students; to determine whether the value of entrepreneurship influence the intention to start a business; to determine whether rural students will have the intentions to start a business and to test the validity of the entrepreneurial intent questionnaire in a South African context. The findings reveal that the TPB is a valuable tool in predicting entrepreneurial intent; the positive value attached to entrepreneurship by close people and the society influences entrepreneurial intent; the majority of rural students have the intention to start a business and the entrepreneurial intent questionnaire is valid to measure the entrepreneurial intent of students in a South African context

Key words: Rural university students, Entrepreneurial intent, Theory of planned behaviour, Limpopo province.

INTRODUCTION

South Africa as a developing country is faced with a high rate of unemployment that is on average of 24.3 percent (Statistics South Africa (StatsSA), 2010:3). This rate of unemployment is calculated based on the proportion of the labour force that is unemployed. Unemployed persons are defined as “those (aged 15–64 years) who: a) Were not employed in the reference week **and**; b) Actively looked for work or tried to start a business in the four weeks preceding the survey interview **and**; c) Were available for work, that is, would have been able to start work or a business in the reference week **or**; d) Had not actively looked for work in the past four weeks but had a job or business to start at a definite date in the future and were available” (StatsSA, 2010:xvi). Therefore, South Africa has an urgent need for a growing pool of potential entrepreneurs with the motivation and the ability to identify and to realise new business opportunities (Orford, Herrington and Wood, 2004:7). On the other hand entrepreneurs are needed to help reduce unemployment, poverty and crime and to stimulate the economy as a whole (Maas and Herrington, 2006:43).

According to Aviram (2006:166), efforts to encourage entrepreneurship may be an effective method to reduce unemployment. Entrepreneurship and the development of small, medium and micro enterprises (SMMEs) are widely recognised as an important source of job creation (Schjoedt and Shaver, 2007:733) and a contributor to the national economic growth and development of both developed and developing countries (Small Enterprise Development Agency (Seda), 2007:6). The South African government has recognised the significance of SMMEs in the development of the economy and has put a variety of support mechanisms in place for SMME development (Umsobomvu Youth Fund, 2003:4). Traditionally graduates have not favoured entrepreneurship as a career option with high preference being given to the public sector and large companies. Given the current unemployment situation, it is expected that the majority of people will have to view self-employment as a career option (Paasio and Pukkinen, 2005:1; Collins, Hanon and Smith, 2004:455). Segal, Borgia and Schoenfeld (2005:51) found that there is a positive relationship between the net desirability for self-employment and the intention to become an entrepreneur. The net desirability of self-employment was obtained by subtracting desirability of working for others from desirability of self-employment.

Some authors suggest that rural SMMEs are the main option for the survival of many rural communities (Ladzani and Nestwera, 2005:9), they form the cornerstone of the local economy and are a major source of employment (Meccheri and Pelloni, 2006:371). However, rural economic development is constrained by negative factors that include sparse populations, remoteness, poor infrastructure and little or no access to vibrant markets (Ladzani and Netswera, 2009:226). Orford *et al*, (2004:17 & 20) and Seda (2007:42) report that rural areas experience significantly lower entrepreneurial activity rates than urban areas and are dominated by necessity entrepreneurs. Over 70 percent of entrepreneurs in rural areas become entrepreneurs because they have no better work alternatives and only 27 percent of entrepreneurs are pursuing a market opportunity. This is contrary to almost 60 percent of entrepreneurs in towns and metropolitan centres who are exploiting opportunities (Orford *et al*, 2004:17). Necessity entrepreneurs are entrepreneurs who got involved in an entrepreneurial activity because they have no better career options (Orford *et al*, 2004:11). Low entrepreneurial activity in rural areas occurs partly due to poor infrastructure and fewer viable opportunities that characterise these areas compared to urban areas.

While Gird and Bagraim (2008:722) were the first to examine the application of the theory of planned behaviour (TPB) in predicting the entrepreneurial intent of South African students, their study took place in the Western Cape which is one of South Africa's highly urbanised provinces. According to StatsSA (2006:22), provinces that have high levels of urbanisation in South Africa are Gauteng (96%), Western Cape (90%), Northern Cape (80%) and Free State (75%). Those which are least urbanised in order from the lowest are Limpopo (10%), Eastern Cape (38%), Mpumalanga (39%), North West (41%) and KwaZulu-Natal (45%). Therefore, testing the ability of the TPB to predict entrepreneurial intent of students in a rural setting such as Limpopo province could assist in the efforts to promote entrepreneurship development in the province. Increasing the number of people who have the ability and motivation to start businesses in rural areas is vital to ensuring sustainable rural economies.

PROBLEM INVESTIGATED

This paper examines, based on the theory of planned behaviour, whether rural university students in Limpopo have the intention to start their own businesses given the high rate of unemployment in the country, poor infrastructure, lack of or access to markets and few opportunities that prevail in their communities.

RESEARCH OBJECTIVES

The objectives of this paper are:

- To test whether the theory of planned behaviour can help explain the entrepreneurial intention of rural university students.
- To determine whether the value attached to entrepreneurship (negatively or positively by people in the closer environment of an individual and by the society in general) influences the intention to start a business.
- To determine whether rural students will have the intentions to start a business.
- To test the validity of the entrepreneurial intent questionnaire in a South African context.

LITERATURE REVIEW

In recent years process-oriented cognitive models have become popular frameworks in entrepreneurship for explaining how entrepreneurs become inclined towards the entrepreneurial career option and how they ultimately engage in the entrepreneurial process (Wickham, 2006:73). Cognitive models focus on attitudes and beliefs and how they can predict intentions and behaviours (Segal *et al*, 2005:44). Complex activities such as new venture creation are viewed as a result of individuals' cognitive processes in which individuals think about the possible future outcomes, decide which of these are desirable, and whether it is feasible to pursue attaining these outcomes.

According to the cognitive approach, individuals will activate their entrepreneurial potential if they have a specific ability, there are environmental possibilities and there is support (Kirby, 2003:17). Within the cognitive approaches are formal, theory-driven models of intentions that have proven remarkably robust in predictive validity (Krueger *et al*, 2000:425; Liñán and Chen, 2006:12). Entrepreneurial intent defined as a state of mind that focuses a person's attention, experience and action toward a business concept, is considered as the key element in understanding the new venture creation process (Bird, 1988:442). Fayolle, Gailly, Kickul, Lassas-Clerc and Whitcanack (2005:6) define entrepreneurial intent as the "...cognitive representation of a person's readiness to perform a given behaviour that is considered to be the immediate antecedent of behaviour". Souitaris, Zerbinati and Al-Laham, (2007:568) postulate that specific behaviours such as entrepreneurship can be predicted with considerable accuracy from intentions to engage in the behaviours under consideration. Krueger, Reilly and Carsrud (2000:413) assert that entrepreneurial activity is an intentionally planned activity. As a result, observing intentions toward the entrepreneurial behaviour can help in predicting this behaviour.

Models of entrepreneurial intent

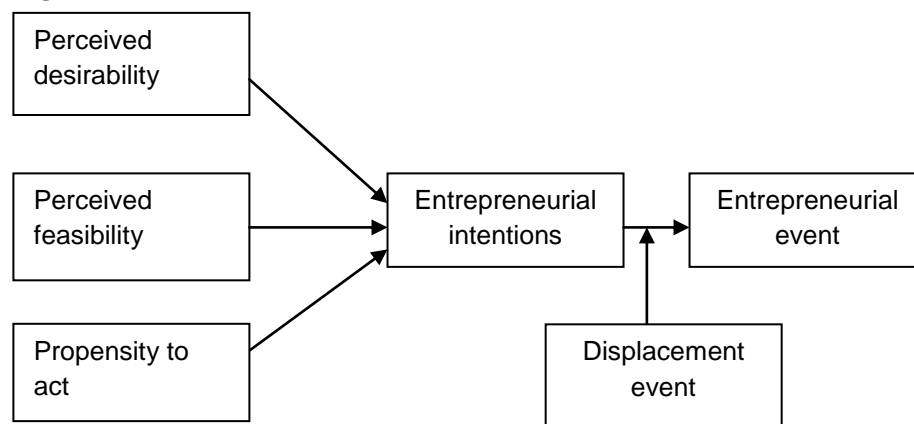
Entrepreneurial intent models are not only useful in predicting the intentions to start a business but they can be used in other strategic decisions such as the decision to grow or exit a business (Krueger *et al*, 2000:412). However, these models cannot predict the success rate of entrepreneurs. The two dominant models used by researchers in studying entrepreneurial intentions are the Shapero and Sokol's model entrepreneurial event (SEE) (Shapero and Sokol,

1982) and Ajzen's theory of planned behaviour (TPB) (Ajzen, 2005). These models are discussed in the next sections.

Shapero and Sokol's model of entrepreneurial event

The SEE model suggests that entrepreneurial intentions can be predicted from perceived desirability, perceived feasibility and propensity to act (Krueger *et al*, 2000:418). Perceived desirability is the personal attractiveness of starting a business. Perceived feasibility is the degree to which one feels personally capable of starting a business. Propensity to act is the personal predisposition to act on one's decisions (Krueger *et al*, 2000:419). The SEE model proposes that the entrepreneurial event emerges from the interactions between situational, cultural and social variables. Shapero and Sokol (1982) view the entrepreneurial process as an event that is initiated by some sort of displacement event. The appearance (or acquisition) of a perceived facilitator or the removal (or avoidance) of a perceived inhibiting factor are some of the displacement events that could lead to the initiation of an entrepreneurial action. Krueger, Schulte and Stamp (2008:2) posit that displacement events could be regarded as triggers to action or barriers to action. The support for the SEE model especially with regard to perceived desirability and perceived feasibility, in predicting entrepreneurial intent is found in Audet (2004:7); Grundstén (2004:69-70) and Orouch (2006:23-25). Figure 1 shows the SEE model.

Figure 1 Shapero and Sokol's model of entrepreneurial event



Source: Kuehn (2008:90)

The theory of planned behaviour

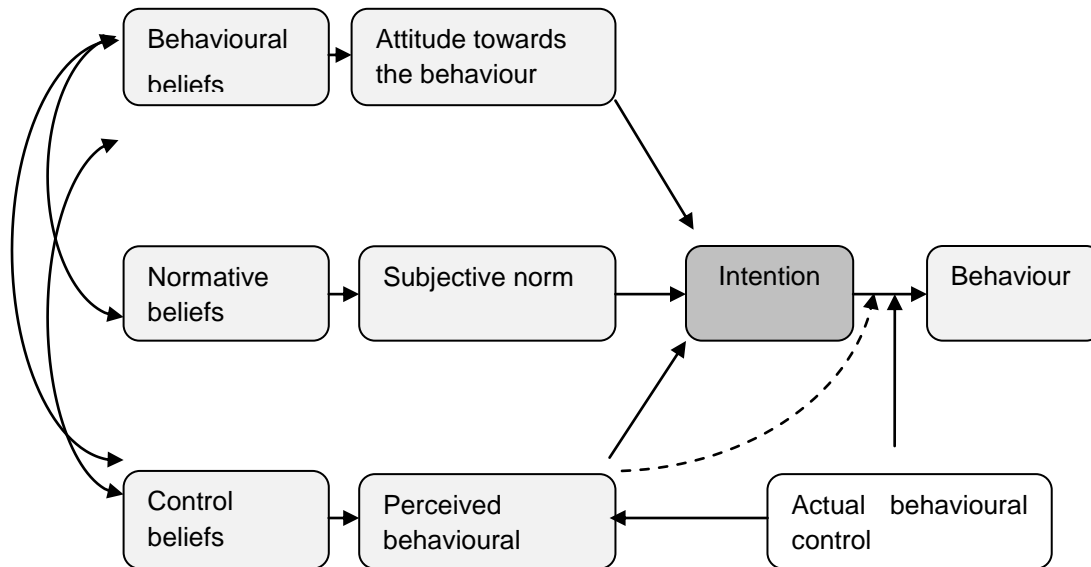
Ajzen (2005:116) reports that the TPB is an extension to the theory of reasoned action developed by Ajzen and Fishbein in 1980. Ajzen (2002:665) and Ajzen and Cote (2008:301) regard the TPB as the most influential and popular framework for the prediction of human behaviour. In this theory intentions are reported as good predictors of behaviour when the behaviour is under volitional control (Ajzen and Fishbein, 2005:196).

The TPB suggests that the most important immediate determinant of action is a person's intention to perform or not to perform that action (Ajzen, 2005:117; Ajzen, 2006:1). Intentions capture the motivational factors that influence the behaviour and they indicate how hard people are willing to try as well as how much effort they are planning to exert in performing the behaviour. When the intention is stronger the more likely is its performance. Since its introduction, the TPB has been empirically tested and validated in numerous studies. These studies include those that focused on the intention to start a business and the growth decision (e.g. Paasio and Pukkinen, 2005; Fayolle *et al*, 2005; Wiklund, Davidsson and Delmar, 2003; Wiklund and Shepherd, 2003; Krueger *et al*, 2000).

Determinants of entrepreneurial intent in the TPB

According to the TPB, entrepreneurial intentions can be predicted with high accuracy from the attitude toward the behaviour, subjective norm and perceived behavioural control (Ajzen, 2005:118). The three conceptually independent determinants of intentions are defined as follows: Attitude toward behaviour refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question. Perceived behavioural control refers to the sense of self-efficacy or ability to perform the behaviour (Ajzen, 2005:118; Ajzen and Cote, 2008:301). Subjective norm refers to the perceived social pressure to perform or not to perform the behaviour. Figure 2 illustrates the determinants of entrepreneurial intention in the TPB.

Figure 2: Ajzen's model of the theory of planned behaviour



Source: Ajzen and Cote (2008:301) and Ajzen (2006:1)

The TPB postulates that beliefs about the likely outcomes of the behaviour and the evaluations of these outcomes (behavioural beliefs); beliefs about the normative expectations of others and the motivation to comply with these expectations (normative beliefs); and beliefs about the presence of factors that may facilitate or impede performance of the behaviour and the perceived power of these factors (control beliefs) play a substantial role in guiding human action (Ajzen, 2002:665; Ajzen, 2006:1). Perceived behavioural control can influence behaviour indirectly via intentions and it can on the other hand predict behaviour directly by serving as a proxy for actual control (Ajzen and Cote, 2008:302; Ajzen, 2006:1). The broken arrow in figure 2 shows that the link between perceived behavioural control and behaviour is expected to emerge only when there is some agreement between perceptions of behavioural control and the person's actual control over the behaviour (Ajzen, 2005:119). Ajzen and Cote (2008:302) suggest that the effect of intention on behaviour will be strong when actual control is high rather than low.

The three conceptually independent determinants of intentions are discussed as follows:

Attitude toward the behaviour

Ajzen (2005:123) argues that people develop attitudes from the beliefs they hold about the consequences of performing the behaviour. The belief strength is multiplied by outcome evaluation and the resulting sum is used to estimate the attitude toward the behaviour. The attitude people hold toward the behaviour is the result of their evaluations of the outcomes associated with the behaviour and the strength of the associations with these evaluations (Ajzen and Cote, 2008:302). Based on this statement it is assumed that the attitude that people hold towards entrepreneurship depends on the expectations and beliefs about personal impacts of outcomes resulting from the behaviour. For example, people will hold negative attitude about starting a business if they think it will result in stress or separation with the loved ones. They will hold favourable attitudes if starting a business will give them increased autonomy, personal wealth and community benefits (Krueger *et al*, 2000:417). If individuals view starting a business as way to provide jobs for themselves and others and to earn community respect they will develop positive attitudes towards starting a business.

Perceived behavioural control

Perceived behavioural control is concerned with people's expectations regarding the degree to which they are capable of performing a given behaviour, the extent to which they have the requisite resources and believe they can overcome whatever obstacles they may encounter (Ajzen, 2002:677). This reflects past experience as well as the presence of factors that can facilitate or impede performance of the behaviour (Ajzen and Cote, 2008:303; Ajzen, Brown and Carvajal, 2004:1110). Perceived behavioural control is determined by control beliefs about the availability of resources and opportunities (Ajzen, 2005:125). It is further suggested that the more resources and opportunities individuals possess and the fewer obstacles or impediments they anticipate, the greater should be their perceived control over behaviour (Ajzen, 2005:125). When people have a sufficient degree of actual control over the behaviour, they are expected to carry out their intentions when the opportunity arises (Ajzen and Cote, 2008:301; Ajzen, 2006:1). The formation of control beliefs depends on factors such as past experience with the behaviour, second-hand information about the behaviour, observing the experiences of acquaintances and friends and other factors that increase or decrease the perceived difficulty of performing the behaviour in question.

Moreover, the degree of control a person has over a given behaviour is influenced by internal as well as external factors. Internally, aspects such as information, skills and abilities and emotions and compulsions can influence successful performance of an intended action (Ajzen, 2005:108). Ajzen argues that a person may intend to perform a behaviour but fail to carry it out because of lack of information, skills and abilities. On the other hand Ajzen reports that people who are overcome by emotions or perform the behaviour under stress cannot be held accountable for results. Externally, situational factors such as opportunity and dependence on others may facilitate or interfere with performance of the behaviour (Ajzen, 2005:109). When people believe that they lack the resources or an opportunity to perform certain behaviour, they are unlikely to form strong behavioural intentions to engage in it despite their favourable attitude toward the behaviour and the belief that important others would approve of their performing the behaviour (Ajzen, 2005:119). This means that the efforts to encourage individuals to start their own businesses can only succeed if institutions that provide entrepreneurial support and their services (whether funding, information, training, mentoring or technical assistance) are accessible. There is also a need to increase or facilitate opportunities for networking with entrepreneurs, for example for information sharing relating to the existence of opportunities. These actions can contribute to perceived capability of starting a business.

Subjective norm

Subjective norm derives from the beliefs that important referent individuals or groups approve or disapprove of performing a given behaviour; or these social referents themselves engage or do not engage in it (Ajzen, 2005:124). Important referents include a person's parents, spouse, close friends, co-workers and even experts in the behaviour of interest. When people believe that most referents with whom they are motivated to comply think they should perform the behaviour they will perceive social pressure to perform it and vice versa.

The majority of studies indicate that subjective norm does not predict entrepreneurial intentions directly but affects personal attraction and self-efficacy/perceived behavioural control (Liñán and Chen, 2006:13; Liñán and Chen, 2009:30; Liñán, Urbano and Guerrero, 2007:7; Liñán, 2008:266). These findings corroborate those in Krueger *et al*, (2000:422); Emin (2003:11); Liñán, Rodriguez-Cohard and Rueda-Cantuche (2005:14); Brännback, Heinonen, Hudd and Paasio (2005:8) and Li (2006:6). Kennedy, Drennan, Renfrow and Watson (2003:10) posit that subjective norm influences entrepreneurial intent in situations where employment is not feasible.

Researchers have discovered an overlap between the two intention models on two elements: Shapero and Sokol's construct of perceived desirability is reported as equivalent to Ajzen's attitude towards the behaviour (personal attraction) and subjective norm; and perceived feasibility proposed by Shapero and Sokol is similar to Ajzen's perceived behavioural control or to Bandura (1997)'s concept of self-efficacy (Krueger and Brazeal, 1994). Fayolle (2007:65) postulates that perceived behavioural control and self-efficacy are closely related concepts which impact on both the intention and behaviour. Fayolle, Gailly and Lassas-Clerc (2006:708) and Kolvereid and Iakson (2006:867) concur that perceived behavioural control appears quite similar to the concept of perceived self-efficacy while Liñán *et al*, (2007:3) and Liñán (2008:259-260) asserted that perceived venture feasibility is similar to perceived behavioural control or to the idea of perceived self-efficacy. Entrepreneurial self-efficacy was in turn found to be related to entrepreneurial intention (Kickul and D'Intino, 2005:44; Zhao, Hills and Seibert, 2005:1269). Brice and Spencer (2007:52) define entrepreneurial self-efficacy (ESE) as the degree to which individuals believe that they have the necessary skills to successfully start a new business venture.

An entrepreneurial intent model integrating the SEE and TPB models

Kolvereid, Iakovleva and Kickul (2007:1) developed and tested an integrated model of entrepreneurial intentions with the goal of investigating whether the SEE model and the TPB can be integrated into one model. The model was also used to predict individuals' decision to be self-employed and ultimately the intention to start a business. Their sample involved 528 university students enrolled in entrepreneurship programs in three countries (Kolvereid *et al*, 2007:2). Kolvereid *et al*, (2007:5) found that the intention to become self-employed and to start a business is a function of desirability and feasibility of self-employment. The desirability of self-employment was influenced by attitude and subjective norm while feasibility was influenced by subjective norm and perceived behavioural control. Kolvereid *et al*, (2007:5) report that in an attempt to predict the intention to become self-employed the TPB and the SEE models can be successfully integrated into one model.

The value attached to entrepreneurship and its impact on the development of entrepreneurial intent

The formation of entrepreneurial intention can be influenced by how people in the closer environment of an individual and the general society value entrepreneurship. The two studies that involved 549 and 249 respectively, last-year students from two universities in Spain found that the determinants of entrepreneurial intention are influenced by perceptions regarding the general-society and closer-environment values (Liñán *et al*, 2007:8; Liñán, 2008:268).

In a study of the effect of social capital on entrepreneurial intention, Liñán and Santos (2007:450) found that both bridging and bonding cognitive social capital had a significant influence on entrepreneurial intention indirectly and explained 57 percent of variance in entrepreneurial intention. Bonding cognitive social capital affected entrepreneurial intention indirectly through perceived desirability (Liñán and Santos, 2007:450-451). Its effect is through knowing family entrepreneurs, knowing non-family entrepreneurs, positive valuation of entrepreneurship as a career in the closer environment and approval of the decision to start a business. Bonding cognitive social capital (knowing non-family entrepreneurs and approval of entrepreneurial career in closer environment) also had a significant impact on perceived feasibility (Liñán and Santos, 2007:450).

RESEARCH METHODOLOGY

The sample

This study was carried out by means of a survey and included 233 third year commerce students at a rural university in Limpopo. Of the 233 completed questionnaires 30 questionnaires were not fully completed and had to be excluded from the sample. The reason for choosing this group of students is that they were suitable for studying entrepreneurial intentions as they were facing important career decisions on completion of their studies of which entrepreneurship could be one of them. This is in line with other similar studies such as Krueger *et al*, (2000:420); Liñán and Chen (2009:602); Liñán (2008:263); Liñán *et al*, (2007:5).

The respondents were all Africans of which 53.7 percent were female and 46.3 percent were male. In terms of their age 23.7 percent were in the age category between 18 and 21 years, 58.1 percent of the respondents were in the age category between 22 and 25 years, 9.8 percent

were in the age category between 26 and 30 years, 3.9 percent were in the age category between 31 and 35 years, 3.4 percent were above 36 years while 0.99 percent did not provide their age.

Data collection instrument

Structured and validated questionnaires that were used in previous studies were distributed to students during their lectures. All questions were adopted with no alterations from studies that tested Ajzen's theory of planned behaviour based on Liñán and Chen (2006:6) and Liñán and Chen (2009:612-613)'s Entrepreneurial Intent Questionnaire: Liñán (2008:270); Liñán *et al*, (2007:9) and Guerrero, Lavín and Álvarez (2009:8). The reliability of the measuring instrument was tested by means of Cronbach Alpha. Garson (2009:2) states that the cut-off criteria for internal consistency reliability is 0.60 for exploratory research and that alpha of at least 0.70 or higher is required to retain an item in an adequate scale. The used questionnaires had the Cronbach Alpha values ranging from .773 to .943 (Liñán and Chen, 2009:602) and from .839 to .891 (Liñán, 2008:266). Students were informed about the purpose of the research and were asked to freely participate in the study by completing the questionnaire. Questionnaires had questions that were based on the seven-point Likert scale and those that were based on nominal scales as illustrated in table 1. Students had to complete the questionnaires in the presence of the researcher in the classroom and it took at least 20 minutes to complete the questionnaires.

Table 1: Measures of entrepreneurial intent and its antecedents

Variable	Items	Cronbach's alpha
Entrepreneurial intent	1. I am ready to do anything to be an entrepreneur (READYENTRE) 2. My professional goal is to be an entrepreneur (PROGOALENT) 3. I will make every effort to start and run my own business (EFFORTSTAR) 4. I am determined to create a business venture in the future (DETCREABUS)	.924

	<p>5. I have serious doubts about ever starting my own business in the future (DOUBTSTART)</p> <p>6. I have a very low intention of ever starting a business in the future (LOWINTENT)</p>	
Attitude toward the act	<p>1. Being an entrepreneur implies more advantages than disadvantages to me (ENTREADVAN)</p> <p>2. A career as an entrepreneur is totally attractive to me (ENTCARATTR)</p> <p>3. If I had the opportunity and resources, I'd like to start a business (OPPRESSTAR)</p> <p>4. Amongst various options, I would rather be an entrepreneur (ENTOPTION)</p> <p>5. Being an entrepreneur would give me great satisfaction (ENTREPSAT)</p>	.847
Perceived behavioural control	<p>1. To start a business and keep it working would be easy for me (STAKEEFIRM)</p> <p>2. I am able to control the creation process of a new business (CONTCREAT)</p> <p>3. I believe I would be completely unable to start a business (COMPUNABLE)</p> <p>4. I would have complete control over the situation if I start and run a business (COMPCONTR)</p> <p>5. I am prepared to do anything to be an entrepreneur (PREPBEENTR)</p> <p>6. I know all about the necessary practical details needed to start a business (KNOPRACDET)</p> <p>7. If I wanted to, I could easily start and run a business (EASYSTABUS)</p> <p>8. If I tried to start a business, I would have</p>	.904

	a high chance of being successful (HICHANCSUC) 9. It would be very difficult for me to develop a business idea (DIFDEVIDEA)	
Subjective norm	1. My friends would approve of the decision to start a business (FRIENDAPPR) 2. My immediate family would approve of the decision to start a business (IMMFAMAPPR) 3. My colleagues would approve of the decision to start a business (COLLEAAPPR)	.826
Valuation of the entrepreneurial career in the closer environment:	1. My immediate family values entrepreneurial activity above other activities and careers (IMMFAMVALU) 2. My friends value entrepreneurial activity above other activities and careers (FRIENVALEN) 3. My colleagues value entrepreneurial activity above other activities and careers (COLVALENTTR)	.842
Social valuation of entrepreneurship	4. In my country, entrepreneurial activity is considered to be worthwhile, despite the risks (ENTWORTHW) 5. The culture in my country is highly favourable towards the entrepreneurial activity (CULFAVENTR)	.853

Source: Liñán and Chen (2006:6); Liñán and Chen (2009:612-613); Liñán *et al*, (2007:9); Liñán (2008:269); Guerrero *et al*, (2009:8); Liñán and Santos (2007:448)

Data analysis

Data was analysed by means of the Pearson correlation. This statistical technique was used to determine the strength of the relationship between variables in the study. It was used to determine the relationship between the antecedents of entrepreneurial intent (attitude toward the behaviour, subjective norm and perceived behavioural control) and entrepreneurial intent.

RESULTS

Attitude toward the behaviour and entrepreneurial intent

Attitude toward the behaviour was statistically significantly correlated with entrepreneurial intent. There was a statistically significant correlation between measures of attitude toward the behaviour and measures of entrepreneurial intent, as illustrated in table 2. There was a statistically significant negative correlation between the reverse measures of entrepreneurial intent and measures of the attitude toward the behaviour. Having a very low intention of ever starting a business in the future was statistically negatively correlated with the perception that being an entrepreneur implies more advantages than disadvantages, a career as an entrepreneur is totally attractive and that being an entrepreneur would give great satisfaction to the respondents. On the other hand having serious doubts about ever starting one's own business and having a very low intention of ever starting a business in the future were statistically negatively correlated with the choice to be an entrepreneur amongst various options available to the respondents.

Table 2: The relationship between attitude toward the behaviour and entrepreneurial intent

Attitude toward the behaviour	Entrepreneurial intent	r	P
Being an entrepreneur implies more advantages than disadvantages to me.	READYENTRE	0.33	0.000*
	PROGOALENT	0.34	0.000*
	EFFORTSTAR	0.27	0.000*
	DETCREABUS	0.35	0.000*
	LOWINTENT	-0.16	0.020**
A career as an entrepreneur is totally attractive to me.	READYENTRE	0.54	0.000*
	PROGOALENT	0.40	0.000*
	EFFORTSTAR	0.51	0.000*
	DETCREABUS	0.34	0.000*
	LOWINTENT	-0.22	0.001*
If I had the opportunity and resources, I'd like to start a business.	READYENTRE	0.39	0.000*
	PROGOALENT	0.29	0.000*
	EFFORTSTAR	0.29	0.000*
	DETCREABUS	0.54	0.000*
	DOUBTSTART	-0.19	0.007*
	LOWINTENT	-0.21	0.003*
Amongst various options, I would rather be an entrepreneur.	READYENTRE	0.37	0.000*
	PROGOALENT	0.53	0.000*
	EFFORTSTAR	0.34	0.000*
	DETCREABUS	0.33	0.000*
	DOUBTSTART	-0.15	0.034**
	LOWINTENT	-0.35	0.000*
Being an entrepreneur would give me great satisfaction.	READYENTRE	0.46	0.000*
	PROGOALENT	0.46	0.000*
	EFFORTSTAR	0.48	0.000*
	DETCREABUS	0.47	0.000*
	LOWINTENT	-0.20	0.005*

*One percent level ** Five percent level

Subjective norm and entrepreneurial intent

A statistically significant correlation was found between subjective norm and entrepreneurial intent as shown in table 3. Approval by immediate family, friends and colleagues of the decision to start a business was statistically significantly correlated with entrepreneurial intent. There was a statistically negative correlation between reverse measures of entrepreneurial intent (having serious doubts about ever starting one's own business and having a very low intention of ever starting a business in the future) and approval of the decision to start a business by the immediate family.

Table 3: The relationship between subjective norm and entrepreneurial intent

Subjective norm	Entrepreneurial intent	r	P
My immediate family would approve of the decision to start a business.	READYENTRE	0.30	0.000*
	PROGOALENT	0.26	0.000*
	EFFORTSTAR	0.42	0.000*
	DETCREABUS	0.48	0.000*
	DOUBTSTART	-0.19	0.007*
	LOWINTENT	-0.31	0.000*
My friends would approve of the decision to start a business.	READYENTRE	0.32	0.000*
	PROGOALENT	0.26	0.000*
	EFFORTSTAR	0.29	0.000*
	DETCREABUS	0.27	0.000*
My colleagues would approve of the decision to start a business.	PROGOALENT	0.25	0.000*
	EFFORTSTAR	0.32	0.000*
	DETCREABUS	0.28	0.000*

*One percent level ** Five percent level

Perceived behavioural control and entrepreneurial intent

The results show that there is a statistically significant correlation between perceived behavioural control and entrepreneurial intent as illustrated in table 4. The reverse measure of

entrepreneurial intent (having serious doubts about ever starting one's own business in the future) was statistically negatively correlated with the perception that to start a business and keep it working would be easy, being able to control the creation process of a new venture, knowing all about the necessary practical details needed to start a business and the perception that if one wanted to, he or she could easily start and run a business. Having serious doubts about ever starting one's own business in the future and having a very low intention of ever starting a business in the future were statistically positively correlated with the belief that one would be completely unable to start a business and that it would be very difficult for one to develop a business idea. On the other hand having serious doubts about ever starting one's own business in the future and having a very low intention of ever starting a business in the future were statistically significantly negatively correlated with the perception of being prepared to do anything to be an entrepreneur and that if one tried to start a business, he or she would have a high chance of being successful. The perception that one would be completely unable to start a business was statistically significantly negatively correlated with entrepreneurial intent measures (being ready to do anything to be an entrepreneur and being determined to create a business venture in the future). On the other hand the perception that it would be very difficult for one to develop a business idea was statistically significantly negatively correlated with the willingness to make every effort to start and run one's own business and the determination to create a business venture in the future.

Table 4: The relationship between perceived behavioural control and entrepreneurial intent

Perceived behavioural control	Entrepreneurial intent	r	P
To start a business and keep it working would be easy for me.	READYENTRE	0.24	0.001*
	PROGOALENT	0.28	0.000*
	EFFORTSTAR	0.28	0.000*
	DETCREABUS	0.19	0.007*
	DOUBTSTART	-	0.043**
		0.14	
I am able to control the creation process of a new business.	READYENTRE	0.33	0.000*
	PROGOALENT	0.27	0.000*

	EFFORTSTAR	0.38	0.000*
	DETCREABUS	0.27	0.000*
	DOUBTSTART	-	0.031**
		0.15	
I believe I would be completely unable to start a business.	READYENTRE	-	0.043**
	DETCREABUS	0.14	0.013**
	DOUBTSTART	-	0.000*
	LOWINTENT	0.17	0.002*
		0.44	
		0.21	
I would have complete control over the situation if I start and run a business.	READYENTRE	0.27	0.000*
	PROGOALENT	0.25	0.000*
	EFFORTSTAR	0.40	0.000*
	DETCREABUS	0.26	0.000*

Table 4 continued

I am prepared to do anything to be an entrepreneur.	READYENTRE	0.53	0.000*
	PROGOALENT	0.49	0.000*
	EFFORTSTAR	0.38	0.000*
	DETCREABUS	0.39	0.000*
	DOUBTSTART	-0.24	0.000*
	LOWINTENT	-0.28	0.000*
I know all about the necessary practical details needed to start a business.	READYENTRE	0.16	0.024**
	PROGOALENT	0.27	0.000*
	EFFORTSTAR	0.21	0.002*
	DETCREABUS	0.22	0.001*
	DOUBTSTART	-0.14	0.043**
If I wanted to, I could easily start and run a business.	READYENTRE	0.20	0.004*
	PROGOALENT	0.24	0.000*
	EFFORTSTAR	0.28	0.000*
	DETCREABUS	0.21	0.002*
	DOUBTSTART	-0.23	0.001*

If I tried to start a business, I would have a high chance of being successful.	READYENTRE	0.42	0.000*
	PROGOALENT	0.30	0.000*
	EFFORTSTAR	0.52	0.000*
	DETCREABUS	0.43	0.000*
	DOUBTSTART	-0.22	0.001*
	LOWINTENT	-0.17	0.015**
It would be very difficult for me to develop a business idea	EFFORTSTAR	-0.17	0.015**
	DETCREABUS	-0.26	0.000*
	DOUBTSTART	0.32	0.000*
	LOWINTENT	0.32	0.000*

*One percent level ** Five percent level

The influence of the valuation of entrepreneurship on entrepreneurial intent

A statistically significant correlation was found between the valuation of entrepreneurial activity and entrepreneurial intent as illustrated in table 5. The valuation of entrepreneurship by people in the closer environment of students is significantly correlated with entrepreneurial intent. Firstly, the valuation of entrepreneurship by the immediate family correlates significantly with making an effort to start and run one's own business and having a professional goal of becoming an entrepreneur. Secondly, the valuation of entrepreneurship by the friends correlates significantly with being ready to do anything to become an entrepreneur, having a professional goal of becoming an entrepreneur and being determined to create a business venture in the future. Thirdly, the valuation of entrepreneurship by colleagues correlates significantly with being ready to do anything to become an entrepreneur and having a professional goal of becoming an entrepreneur.

Additionally, the social valuation of entrepreneurship has a statistically significant correlation with entrepreneurial intent. The perception that entrepreneurial activity is worthwhile despite its associated risks correlates significantly with being ready to do anything to become an entrepreneur, having a professional goal of becoming an entrepreneur, the willingness of students to make every effort to start and run their own businesses and being determined to create one's own business in the future. There was statistically negative correlation between the perception that entrepreneurial activity is worthwhile despite its associated risks and having a very low intention of ever starting a business in the future. The perception that the culture of the

country is highly favourable towards entrepreneurial activity is significantly correlated with being ready to do anything to become an entrepreneur, having a professional goal of becoming an entrepreneur and the willingness of students to make every effort to start and run their own businesses. This perception was significantly negatively correlated with having serious doubts about ever starting a business in the future.

Table 5: The relationship between the valuation of entrepreneurial activity and entrepreneurial intent

Valuation of entrepreneurship	Entrepreneurial intent	r	p
My immediate family values entrepreneurial activity above other activities and careers.	EFFORTSTAR	0.14	0.044**
	PROGOALENT	0.24	0.001*
My friends value entrepreneurial activity above other activities and careers.	READYENTRE	0.24	0.001*
	PROGOALENT	0.25	0.000*
	DETCREABUS	0.32	0.000*
My colleagues value entrepreneurial activity above other activities and careers.	READYENTRE	0.15	0.035**
	PROGOALENT	0.19	0.006*
In my country, entrepreneurial activity is considered to be worthwhile, despite the risks.	READYENTRE	0.27	0.000*
	PROGOALENT	0.17	0.013**
	EFFORTSTAR	0.15	0.031**
	DETCREABUS	0.24	0.001*
	LOWINTENT	-	0.010*
		0.18	
The culture in my country is highly favourable towards the entrepreneurial activity.	READYENTRE	0.21	0.003*
	PROGOALENT	0.29	0.000*
	EFFORTSTAR	0.16	0.022**
	DOUBSTART	-	0.038**
		0.15	

*One percent level ** Five percent level

LIMITATIONS

The shortcomings of this study lies in its cross-sectional nature. It is therefore impossible to infer casual relationships and actual behaviour. However, Ajzen and Cote (2008:302) suggest that the effect of intention on behaviour will be strong when actual control over the behaviour is high rather than low.

Another limitation is that the study cannot predict the success of entrepreneurs compared to their entrepreneurial intent. This is because the success of a business depends on coherence between a variety of factors, for example the strategies adopted, an entrepreneur's capacity to learn, the state of the environment, and the skills and internal resources which may be implemented differently depending on the various phases of the entrepreneurial process (Fayolle, 2007:95 & 157). In case those have the intention to start a business decide to establish their own ventures, it would not be possible predict who will achieve this coherence through entrepreneurial intent models.

CONCLUSION

The purpose of this study was to investigate the entrepreneurial intentions of rural university students based on the TPB. The majority of students in this study have the intention to start a business in the future. The findings support previous research regarding the use of the TPB as a valuable model in predicting entrepreneurial intent. These findings also support previous research in validating Liñán and Chen (2006 and 2009)'s entrepreneurial intent questionnaire as a reliable tool in measuring the antecedents of entrepreneurial intent and entrepreneurial intent. The results indicate that the attitude toward the behaviour, subjective norm and perceived behavioural control are statistically significantly correlated with entrepreneurial intent as predicted by Ajzen (2002:665); Ajzen (2006:1); Ajzen (2005:117-118) in his TBP. The findings in this study corroborate those of Liñán and Chen (2006:11); Liñán and Chen (2009:30); Krueger *et al*, (2000:422); Emin (2003:11); Liñán *et al*, 2005:14; Brännback *et al*, (2005:8); Brännback *et al*, (2007:5) and Li (2006:6) on the impact of the attitude toward the behaviour and perceived behavioural control on entrepreneurial intent. Contrary to these studies the findings indicate a statistically significant correlation between subjective norm and entrepreneurial intent which support Gird and Bagraim (2008:719) who found that perceived behavioural control, subjective norm and the attitude toward entrepreneurship were significant predictors of entrepreneurial intent. However, subjective norm had the weakest relationship with

entrepreneurial intent in Gird and Bagraim' study. In addition, Kolvereid and Iaksen (2006:880) reported a significant relationship between attitude and subjective norm and self-employment intentions. As Kennedy *et al*, (2003:10) pointed out that subjective norm influences entrepreneurial intent in situations where employment is not feasible, the findings on subjective norm may be indication that high unemployment rate in Limpopo has made people to view entrepreneurship as a viable career option. Entrepreneurship seems to be valued as a viable career option among students in this study. This is largely because they belief that their immediate families, friends and colleagues would approve of their decision to start a business and their immediate families, friends and colleagues value entrepreneurial activity above other activities and careers. There are also positive perceptions among students that the culture in the country is supportive of entrepreneurial activity. The findings show that the efforts to build an entrepreneurial society may be successful if entrepreneurship is valued as a viable career option by the society and the programmes aimed at developing entrepreneurship impact positively on the perceptions of desirability and feasibility of entrepreneurship.

RECOMMENDATIONS

Entrepreneurship is an intentional activity. An understanding of the antecedents of entrepreneurial intent and the factors impacting on these antecedents is vital in improving the efforts to promote entrepreneurship especially in South Africa where the unemployment rate is high. While the South African government has introduced various SMME support programmes in the past years, the TPB can be a valuable tool in evaluating the impact of such programmes on the intention to start a business. The TPB can be used to evaluate the growth intentions of existing entrepreneurs and small business managers. Hence it is only when SMMEs aim towards high growth that job creation becomes a reality. Therefore, the impact of SMME support will be great when supported SMMEs achieve growth.

The design of SMME support programmes should take into consideration the diversity of the needs of the beneficiaries of these programmes and be tailor-made to meet these needs. Firstly support programmes can be designed to change the mindsets, attitudes and intentions of those who have not thought about entrepreneurship as a viable career. These individuals will benefit from abundant information from various media relating to SMME support, acknowledgement and appreciation of entrepreneurship as a career among the society and celebration of

successful entrepreneurship. Secondly, SMME support programmes may be directed to the needs of those who have made up their minds to start their own ventures. In this case support programmes should make it possible for one to start a business. Lastly, SMME support programmes should be targeted to promoting effective management and growth of existing SMMEs. Depending on the focus and goals of the support programmes, all these efforts may contribute to the perceptions that entrepreneurship is desirable and feasible which in turn lead to the intention to act.

For higher education institutions the TPB is valuable as a tool in designing and evaluating the impact of education programmes on the entrepreneurial intentions of students. For example, in entrepreneurship education programmes the TPB can be used to assess the impact of these programmes on changing the antecedents of entrepreneurial intent and ultimately entrepreneurial behaviour. This requires students to be exposed to entrepreneurial role models and their businesses and hands-on learning activities in order to increase perceptions of desirability and feasibility of entrepreneurship. As Kickul and D'Intino (2005:45) put it, being exposed to an environment that is perceived to be more supportive can enhance entrepreneurial self-efficacy. Studies on entrepreneurial intent are still new in South Africa. The TPB can also be used as a tool for entrepreneurial development. Therefore, there is a need for more knowledge regarding the factors influencing the antecedents of entrepreneurial intent. More scientific tools are necessary to bridge the gap between the entrepreneurial characteristics and the characteristics of the business. Future research can apply entrepreneurial intent models to examine for example, the impact of entrepreneurship education, entrepreneurial support and culture on entrepreneurial intent.

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IS THERE A LIGHT AT THE END OF THE TUNNEL REGARDING IT PROJECTS?

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ABSTRACT

This article focus on the success rate of information technology (IT) projects and forms part of a longitudinal study. The problem is that IT projects are notorious for failing and are costing organisations in the excess of millions of dollars. A survey-based research was conducted with 357 IT project professionals from various South African service and manufacturing organisations. The purpose of the research is to determine whether project success has increased since the inception of this longitudinal study. An improvement will result in a better perception of IT projects as well as saving organisational resources including money. The results indicated that there is an improvement in project success and that it can be contributed to certain factors and criteria. The results contribute to the current body of knowledge regarding IT project success and in practice, the results can be used by organisations to increase IT project success.

INTRODUCTION

Defining project success is difficult especially in the case of information technology (IT) projects. The reason is that there is no common understanding of what defines IT project success (Thomas and Fernández, 2008). The Chaos Report of the Standish Group (Eveleens and

Verhoef, 2010; Glass, 2005) and the South African Prosperus Report (Labuschagne and Marnewick, 2009) reports on IT project success but until now, has failed to determine what constitutes IT project success.

It is important to determine how IT project success is measured since the project manager's career is based and build based on a proven track record of delivering projects successfully. This implies that there must be a common understanding of what constitutes a successful IT project. Organisations cannot measure their own effectiveness and efficiency if they do not have the means to measure IT project success. Currently there are various ways to measure project success in general such as the triple constraint (Project Management Institute, 2008; Zwikaël, 2009) as well as the quadruple constraint (Schwalbe, 2010). Other success criteria include the strategic alignment of the project or the benefits realised from the project (Marnewick and Labuschagne, 2009a, 2009b; Milosevic and Srivannaboon, 2006). The indication from literature is that although there is different ways to measure IT project success, the onus is on the organisation and project manager themselves to determine the success of an IT project.

The research in this article attempts to address the issue of defining IT project success. Previous research on the success of IT projects left it up to the respondent to determine whether an IT project was successful or not without determining how the respondent defined a successful project. The current research asked the respondents various questions regarding project success including success criteria and factors contributing to project success. In order for organisations to make informed decisions regarding the success of their IT investments, a baseline needs to be in place to be measured against. The research presented in this article will assist organisations in determining a baseline.

A quantitative research approach was used and three hundred and fifty-seven respondents indicated their involvement in IT projects. The respondents also had to indicate whether the projects were delivered successfully or not and how they determine a successful project.

The article is divided into four main sections where the first section provides an overview of the literature available. The second section focuses on the research methodology and the third section analyse and interpret the results presented. The fourth and last section concludes the article and focus on recommendations and future research.

LITERATURE SURVEY

It is no secret that project managers continue to be evaluated, in their practice, according to the outcomes of the projects they manage, and that their careers and the success of their organisations depend on performance in these projects (Ika, 2009). Given this statement, it is still a mystery why IT project managers cannot deliver successful projects.

The success rate of IT projects remains questionable, as do the benefits that an organisation receives from investing in project management capability (Abdullah Saeed Bani, Frank, and William, 2008; Dalcher and Brodie, 2007). The 2009 CHAOS report states that only one in three IT projects is a success and contributes to the overall success of an organisation (Eveleens and Verhoef, 2010).

A similar study was conducted in South Africa to determine IT project management maturity of organisations as well as the success rate of IT projects (Labuschagne and Marnewick, 2009). Through an extensive survey of over 200 respondents, it was found that 27% of projects failed, 36% were challenged and 37% were considered a success. No formal definitions were given for the three categories of failed, challenged and successful. Participants were expected to use their own perception or organisation view to categorise projects. For the purposes of Labuschagne and Marnewick's research, success is defined as completely satisfying the needs of the customer, challenged is defined as partially meeting the needs and failed is defined as not meeting the needs of the client at all. Table 1 illustrates the longitudinal results of both the CHAOS and Prosperus reports.

Table 1: Longitudinal Results of the CHAOS and Prosperus Reports

Success Rates	CHAOS 2002	Prosperus 2003	CHAOS 2006	Prosperus 2008	CHAOS 2009
Failures	15%	22%	19%	27%	24%
Challenged	51%	35%	46%	36%	44%
Successful	34%	43%	35%	37%	32%

Thus, success and failure are difficult to define and measure since they mean different things to different people. However, success is also a concept that is critical when we are trying to foretell the future of our projects. Although IT project failure is considered widespread, there is no commonly agreed definition of success and failure. It is suggested that success is achieved

when an information system is perceived to be successful by stakeholders (Thomas and Fernández, 2008).

Since a project is usually a means to an end rather than an end itself, it is reasonable to want to know if the project is successful, whatever the end might have been. Herein lays the difficulty. The success of a project can be determined from the perspective of the means (the project itself) or the end (what it was intended or expected to accomplish) depending on the interests of the stakeholder (Bannerman, 2008).

RESEARCH OBJECTIVES

The research is longitudinal and the main objective of this research is to determine the trend in relation with project success. Based on this main objective, various other objectives are derived and can be summarised as follows:

- Is there a correlation between the size of a project and the success of the project?
- What are the success criteria to define a project as successful?
- What are the various factors that contribute to project success?
- Is there a correlation between the project management maturity of the organisation itself and the ratio of project success?

The layout of the article follows the research objectives and is discussed in detail in the following sections.

RESEARCH METHODOLOGY AND DESIGN

The research approach selected was quantitative as Project Management issues are investigated in a large population using predetermined categories so that broad and generalisable comparisons can be made (Patton, 2002; Creswell, 2003; Blanche and Durrheim, 2004). Another reason is that numbers can be analysed using descriptive and inferential statistics (Bless and Higson-Smith, 2004; So and Leung, 2004).

Profile of the Respondents and Setting

Three hundred and fifty seven respondents, representing different types of industries in South Africa, participated in the survey. There were 215 females, 106 males and 36 respondents who did not indicate their gender. Sixty-nine percent of the respondents were between the ages of 21 and 40, 19.3% between 41 and 49 and the remainder either are older than 50 or did not indicate their age. Participants from the various organisations presented a random sample which is important to ensure they are representative (Blanche and Durrheim, 2004; Page and Meyer, 2000).

Data Collecting Methods

Data was collected using a structured questionnaire with 193 items placed under 25 questions. The questionnaire was distributed to over 800 people and a total of 357 usable responses were received from 10 industry sectors.

The questionnaire was hosted electronically on a website and invitations to participate were distributed via e-mail, personal invitation and a South African project management magazine. Senior students were also utilised in collecting responses from different organisations.

Analysis of Data

The data collected through the questionnaire was processed and analyzed by Statkon, an independent enterprise, operated by the Statistics Department at the University of Johannesburg, specialising in statistical analysis, using SPSS (Armstrong and Everett, 1990; Hinton, Brownlow and McMurray, 2004), a statistical analysis software package.

The following types of analysis and statistical tests were performed on the data (Leeper, n.d.):

- Reliability Analysis - allows the researcher to study the properties of measurement scales and the items that comprise the scales
- One Way ANOVA - used to test the hypothesis that several means are equal, frequent and descriptive
- T-Test - tests the difference of means between two groups defined by a missing indicator variable for each of the other variables.

The mean, variance and standard deviation were devised from the data as it formed the basis for inferential statistical procedures (Blanche and Durrheim, 2004).

The Assessment of Validity

Reliability is concerned with the consistency of measures. Equivalent-form reliability, similar to test-retest method and item analysis was used for judging the reliability of the research design (Bless and Higson-Smith, 2004:179). To ensure the validity of data, content validity, face validity and construct validity were used. Triangulation and various sources of evidence enhanced the construct validity of this study. This research is characterised by the use of different data sources (10 industry sectors), improved content and known theory or models such as the PMBoK® guide (Project Management Institute, 2008) and Project Management Maturity Model (PMMM) (Kwak and Ibbs, 2002; Dinsmore and Cabanis-Brewin, 2005; Crawford, 2006). The Organisational Project Management Maturity Model (OPM3) (Project Management Institute, 2009) was not used as this would make it impossible to compare results with previous editions of the Prosperus report.

The researchers performed the necessary preparations to improve their essential competence in the field, which included the clarification of biases and assumptions (LeCompte, Preissle and Renata, 1993) which should enhance the validity and reliability of the findings. Merriam's (Merriam, 1999) strategies (peer/colleague examination, the statement of the researcher's biases, submerging the researcher in the study) were followed in this study, thus enhancing the internal validity of the findings.

RESULTS AND FINDINGS

The following sections discuss the results and findings of the research. The first aspect to be addressed is the involvement of the respondents with IT projects.

Project Involvement

Figure 1 below indicates that 76.1% of all the respondents managed between 1 and 10 projects for the period 2007 to 2008. The mean value is 8.95, which indicates that most of the project managers surveyed managed multiple projects. Anecdotal evidence suggests that the majority of project managers were expected to manage multiple projects. This needs to be investigated further to establish the impact that managing multiple projects has on project success (Pellegrinelli, Partington, Hemingway, Mohdzain, and Shah, 2007).

Figure 6: Involvement in projects

In the past 24 months, how many projects have you been involved in? (Number)

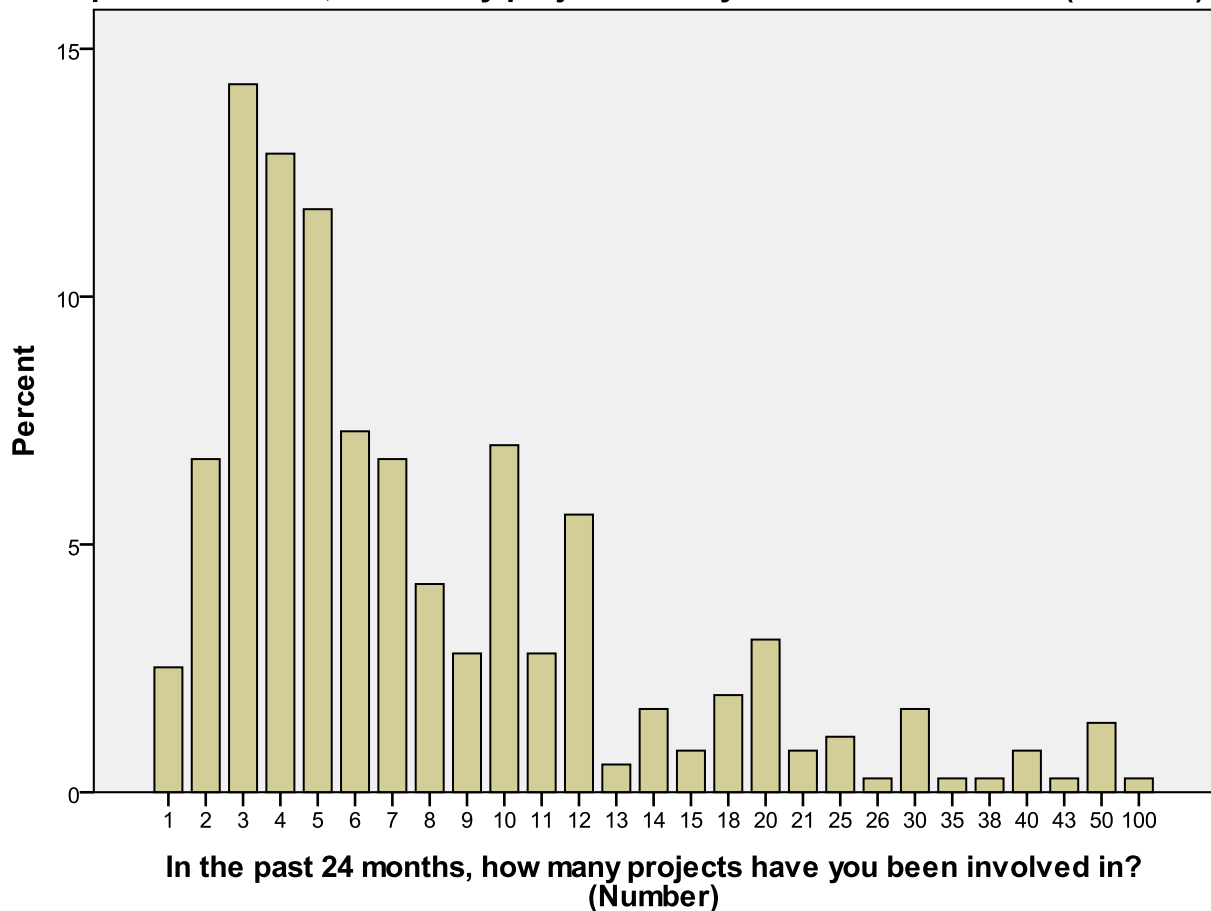
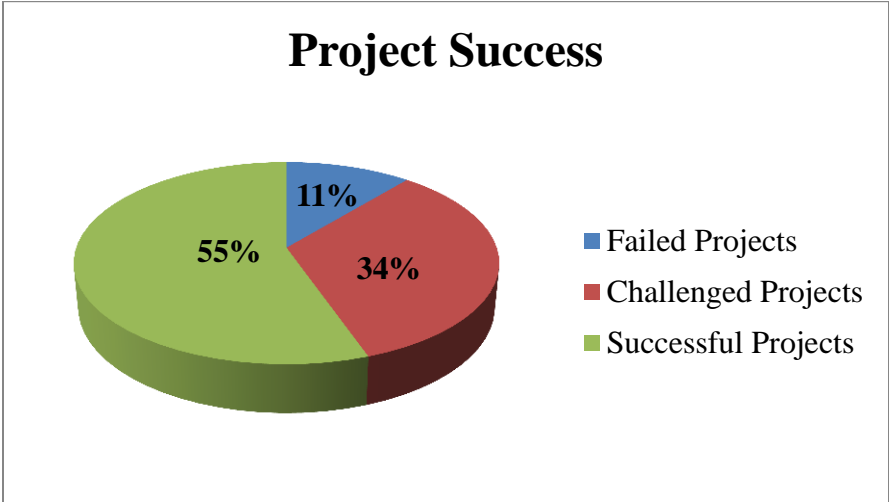


Figure 1 also indicates that there are project managers that claim the involvement in 50 to 100 projects over a two year period. This is doubtful and needs further analysis. Since the questionnaires were completed anonymously, it is difficult to verify these data.

Success Rates

A total of 357 individual projects were examined to determine the factors that influenced their outcome. Project outcome can be measured in various ways (Jugdev and Thomas, 2002; Agarwal and Rathod, 2006; Andersen, Birchall, Jessen, and Money, 2006). For the purpose of the study, the same categories as in the Chaos and Prosperus 2008 reports were not used. No formal definitions were given for the three categories of failed, challenged and successful. Participants were expected to use their own perception or organisational view to categorise projects. The distribution of projects based on these three categories is as follows:

Figure 7: Project success rates in South Africa (2009)



The rate for successful, challenged and failed projects calculated in this survey is compared to those from 2003 and 2008 as indicated in table 2 below. The results from the 2002, 2006 and 2009 CHAOS reports are also included to show the comparison with the USA-based IT project success rate.

The results show that challenged projects have remained similar, while failures have increased and successes have decreased.

Table 2: Success rate comparison

Success Rates	CHAOS 2002	Prosperus 2003	CHAOS 2006	Prosperus 2008	CHAOS 2009	Prosperus 2010
Failures	15%	22%	19%	27%	24%	11%
Challenged	51%	35%	46%	36%	44%	34%
Successful	34%	43%	35%	37%	32%	55%

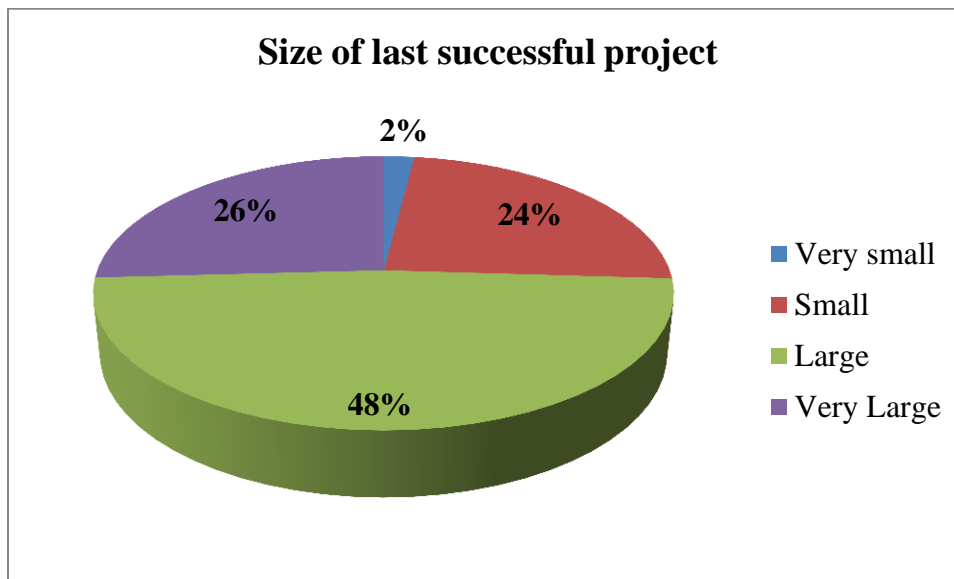
The figures indicate that the success rate in South Africa has fluctuated since 2003 between 43%, 37% in 2008 and 55% in 2010. These figures were fairly in line with the 2006 and 2009 CHAOS findings of 35% and 32% respectively. An increase of 67% in success rate is however reported in South Africa from 2008 to 2010. Findings for challenged projects, indicates a stabilised environment of approximately 35%. Failed projects are the lowest in the history of this longitudinal study at 11% down from 27% in 2008.

One possible explanation could be that the definition of successful, challenged and failed has changed over time as is evident from literature (Cooke-Davies, 2002; Sonnekus and Labuschagne, 2003; Thomas and Fernández, 2008). Other explanations could be that the nature of projects is changing by growing in size and complexity as well as the global shortage of skilled IT professionals. Further investigation is required to confirm the reasons for this trend (Yu, Flett and Bowers, 2005; Ali, Anbari and Money, 2008).

A further analysis is done on the size of the last successful project. Respondents had to determine what the size of their last successful project was. They could choose between very small, small, large and very large. The criteria for determining the size of the project was left for the individual self. The reason is that based on the type of organisation and industry, a small project might be a very large project for another organisation in another industry.

Figure 3 shows the size of the last successful project in percentages.

Figure 3: Success of last successful project



Most of the respondents (48%) were involved in large projects. Small and very large projects were evenly distributed (24% and 26% respectively). The question arises then if there is a correlation between project success and the size of the project itself. Table 3 indicates that there is a positive correlation between the project size and project success.

Table 3: Correlation between project success and project size

	Were successful? (number)	
What was the size of the last successful project?	Pearson Correlation	.120*
	Sig. (2-tailed)	.033

*Correlation is significant at the 0.05 level (2-tailed).

This implies that the larger the project, the more successful the project will be. The reason might be that organisations do allocate a vast amount of money and resources to a large project. Due to this allocation of money and resources, it is possible that these projects are receiving attention from the project sponsors to ensure that valuable and scarce resources are not wasted. This is still only speculation and opens the door for more specific research in this area.

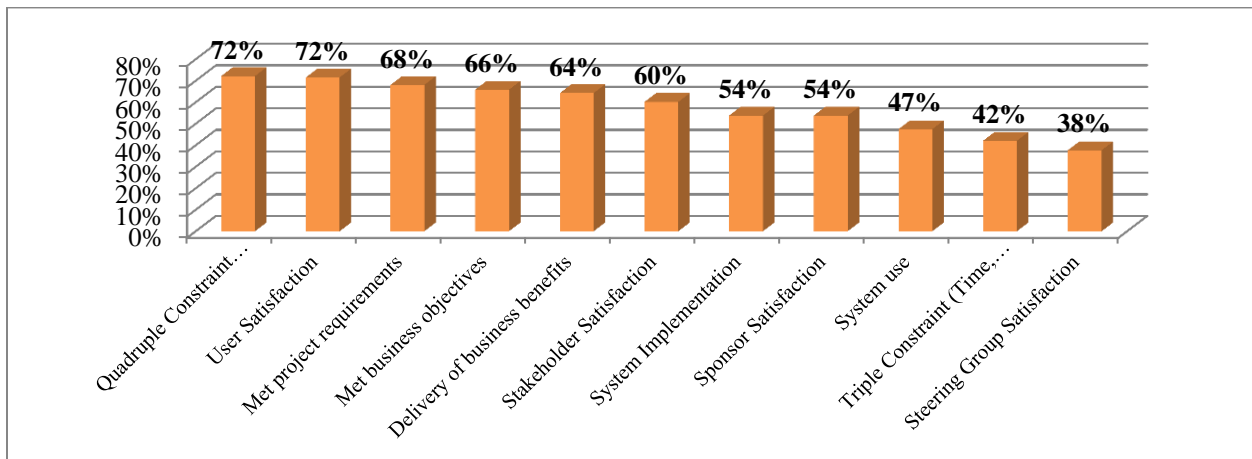
The next aspect investigates what the perception is of the respondents regarding project success.

Success Criteria

Since it is almost impossible to define project success, for the purpose of the Prosperus 2010 report, an additional question was built into the original questionnaire asking the respondent to qualify success within the organisation. The success criteria were derived from various sources as to provide a complete as possible list to the respondents (Ahadzie, Proverbs, and Olomolaiye, 2008; Ika, 2009; Khang and Moe, 2008; Thomas and Fernández, 2008).

The responses are shown in figure 4.

Figure 4: Project Success Criteria

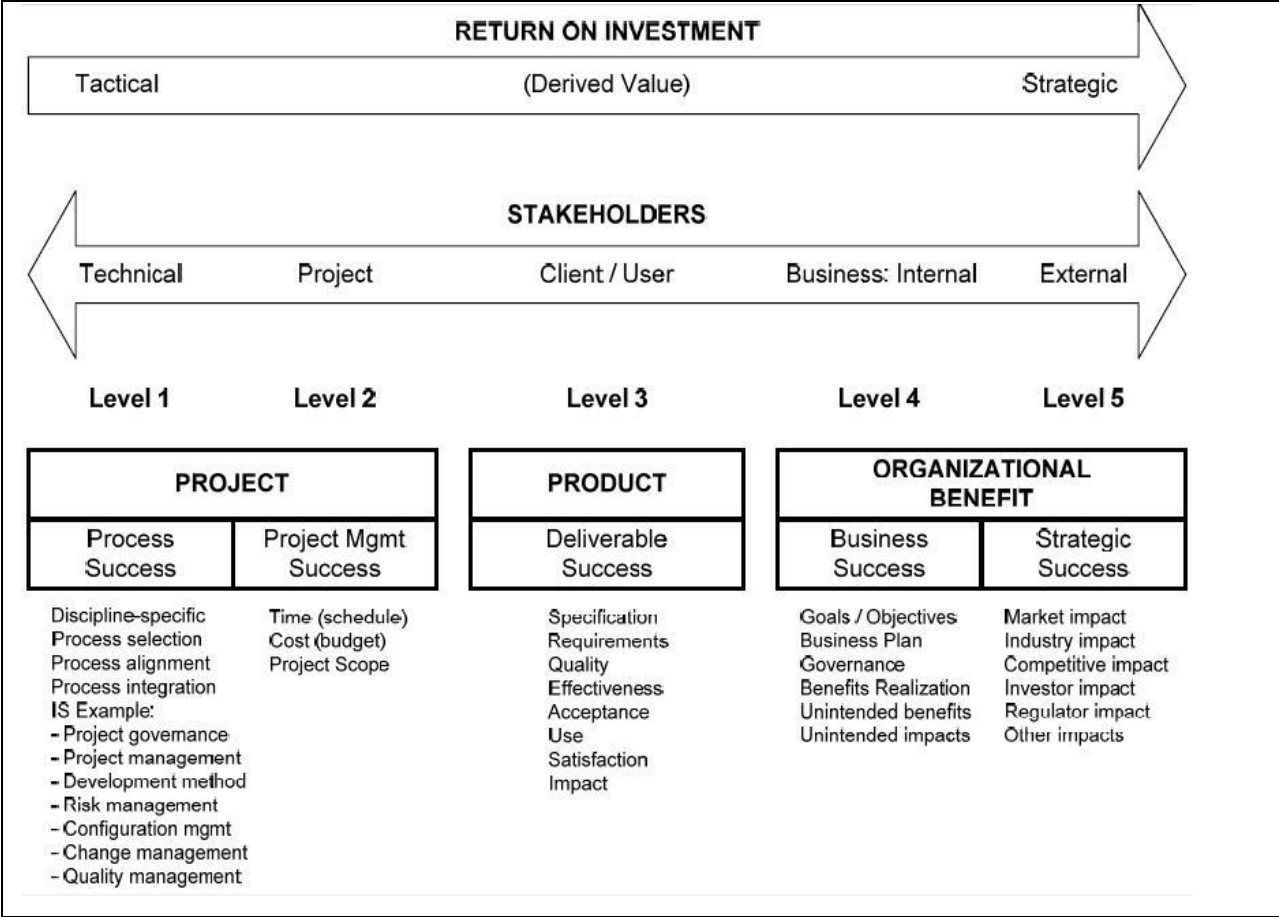


This indicates that organisations are slowly but surely making progress from the original triple constraint to more business related criteria. The success criteria can be divided into two groupings where the first grouping focus on the traditional criteria i.e. time, cost, scope and quality. Almost two-thirds (72%) of the respondents indicated that the quadruple constraint is still important and forty-two percent indicated that the original triple constraint is also important. This implies that project managers are still evaluated on delivering projects within the allocated time and cost estimates. This means that the success of a project can be determined from the perspective of the means (the project itself).

The second grouping focus more on the perspective of the end of the project i.e. what it was intended or expected to accomplish. Criteria that were listed are *User Satisfaction* (72%), *Met Project Requirements* (68%) and *Met Business Objectives* (66%).

Project success is thus measured at two levels i.e. the project itself and then also the deliverables and products of the project itself. Bannerman (2008) indicated five levels of project success and it is clear from figure 5 that the respondents measure project success up to level 3.

Figure 5: Levels of project success (Bannerman, 2008)



This approach enables success to be determined and periodically re-determined as benefits accrue from the project over time. It also enable stakeholders to progressively map success to perceptions of higher derived value from the project as benefits accrue. Based on this framework, project success is defined by the highest level of benefit achieved by the project at any point of reflection. This makes it possible for a project to fail at a lower level of assessment but still succeed at a higher level of perceived return from the project.

Levels 4 and 5 are measuring the anticipated benefits of the products of the project itself and do not form part of the paradigm of the project manager.

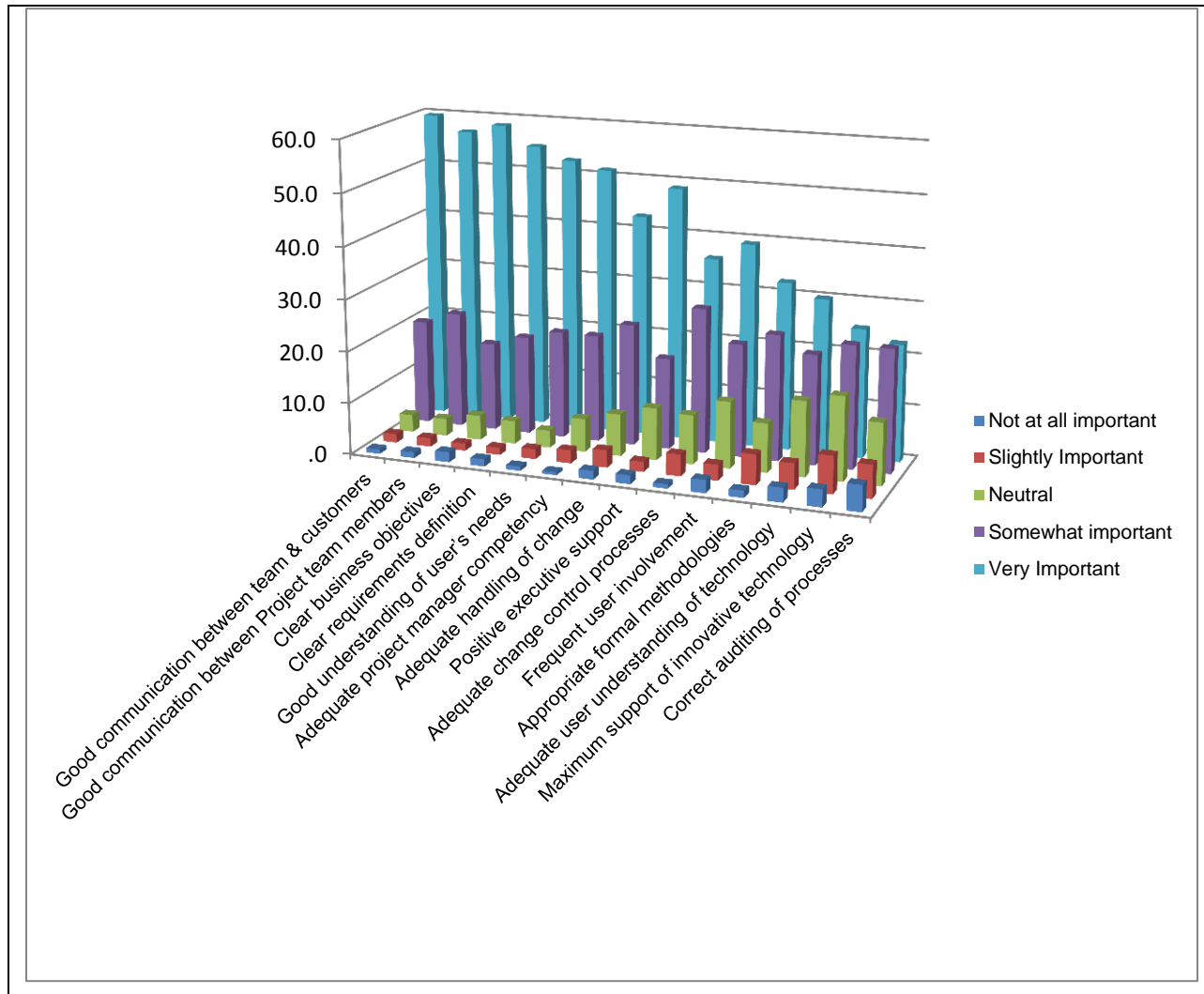
The following section looks at factors that contribute to projects being successful.

Factors contributing to project success

Respondents could select any of fourteen contributing factors. These factors could be graded based on a Likert-scale ranging from Not at all important to Very Important.

Figure 6 lists all the contributing factors from Very Important to Not important at all.

Figure 6: Factors contributing to project success



The top 5 contributing factors can also be grouped into two groups: the first group relates to communication within the project team and with the customer. This is quite significant since project communication management is one of the nine knowledge areas discussed and described in the PMBoK® Guide (Project Management Institute, 2008).

The second group of contributing factors focuses on the objectives, requirements and needs of the organisation and customer. This underlines the finding that one of the criteria to define project success is based on meeting the business requirement and objectives.

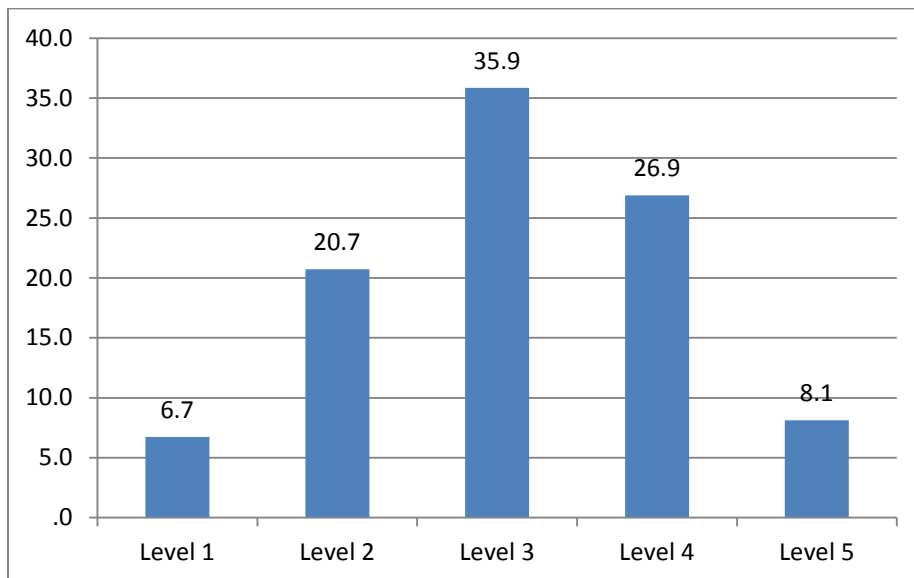
The next section focuses on the organisation's project maturity level and if there is a correlation between project management maturity and project success.

Maturity versus project success

Project management maturity models (PMMM) provides a framework for improving project management practices in an organisation (Cooke-Davies and Arzymanow, 2003; Jugdev and Thomas, 2002; Pennypacker and Grant, 2003; Project Management Institute, 2009). The principle is that as the organisation progresses through the maturity levels, it becomes better at what it does, and also better equipped to deal with changes in procedures and practices, thereby enabling an organisation to complete projects at a higher rate of success.

Respondents were asked to give an estimate of their organisation's IT project management maturity, using the PMMM scale provided. Figure 7 reflects the respondents' perception of their respective organisation's project management maturity.

Figure 7: Perceived Project Management Maturity



According to perceived level of maturity, the majority of the organisations (35.9%) perceived themselves to be, on average, at level 3, with 20.7% of the organisations at level 2. Most organisations (62.6%) are perceived to be at maturity levels 1 to 3.

Table 3 shows the longitudinal analysis of project management maturity.

Table 3: Longitudinal Analysis of Project Management Maturity

Maturity Level	Prosperus 2008	Prosperus 2010	Change
Level 1	5.3	6.7	↑
Level 2	27.7	20.7	↓
Level 3	39.3	35.9	↓
Level 4	20.4	26.9	↑
Level 5	7.3	8.1	↑

An interesting observation is that 62.8% of the organisations are either on level 3 or 4. This implies that organisations are mature and based on the definition of maturity, enable an organisation to complete projects at a higher rate of success.

This raises the question whether project management maturity influence the success of a project. A correlation was done between project success and project maturity levels. Table 4 illustrates this correlation but as per the figures, there is no correlation to determine outright if project success is dependent on the maturity level of an organisation.

Table 4: Correlation between Project Management Maturity and Project Success

	Were successful? (number)	
In your opinion what is the overall level of IT project management maturity in your organisation?	Pearson Correlation	.093
	Sig. (2-tailed)	.082

This supports the notion that projects can still be successful despite an organisation being at level 1. Success becomes dependent on the individual and not on the processes. Yazici (2009) stated that “project management maturity is significantly related to business performance but not to project performance.”

The longitudinal analysis indicates that IT project success in a South African context is significantly higher those previous years. It is also significantly higher than the results from the CHAOS reports. The indication is that by including the additional question asking respondents to qualify project success, project managers were more inquisitive regarding how project success is defined.

It is also clear that IT project success is positively correlated to the size of the project. This is the first time that a positive correlation is found since this specific research was conducted in 2003. It might be of interest to include in future research the respondent's definition of size.

The responses clearly indicate that organisations are still using the triple and quadruple constraints to measure success. The top four project success criteria are all related to the project itself and the way that the product or service of the project satisfies the needs of the users and organisation. This confirms Bannerman's view that the success of a project can be determined from the perspective of the means (the project itself) or the end (what it was intended or expected to accomplish) depending on the interests of the stakeholder.

A consistent factor that contributes to project success is communication. This was already highlighted in the previous editions of the Prosperus report and the indication is that it is going to stay like that. Another factor that is also again featuring is the need of the project team to understand the requirements and business needs of the organisation. It is possible to deduct that communication and the understanding of the needs are mutually inclusive. This means that without good communication there will be no clear requirements and business objectives. This will lead ultimately to the failure of projects.

Again the results indicate that the project management maturity of an organisation does not have a positive impact on the success rate of projects. The research did not investigate if there is a negative correlation implying that a low maturity will result in project failures.

CONCLUSIONS

The literature clearly indicates that although there are criteria to define project success, there is no general consensus as to what these criteria must be. This makes it difficult for organisations to determine whether a project is a success or not.

The research findings clearly indicates that for IT project to be successful, various factors must be in place such as communication and a clear understanding of the business needs. These factors are manageable and can thus contribute to success of IT projects. The criteria for a successful project are also for the first time reported on and organisations can utilise these to provide an internal baseline on defining project success. The implication is that if organisations can manage the contributing factors and define project success explicitly, then the possibility of

achieving project success increases. Although there is no suggestion that project management maturity plays a role, it is implied by literature that the more mature an organisation, the higher the success rate of projects.

The value of the research results presented in this paper lies in the realisation that project success is not just determined by adherence to best practices or formal processes, but requires an environment and context conducive to business success. Project success cannot be viewed in isolation either. The cumulative result of projects is what ultimately determines business success.

Since this research is longitudinal, the research will continue to determine if there are any improvements in the successful delivery of ICT projects and what organisations must have in place to ensure continuous improvement.

MANAGERIAL IMPLICATIONS

The results of this longitudinal study indicate that the success rate of IT projects is increasing. It is still alarmingly low in comparison with other projects in other disciplines. This low success rate means that organisations are still wasting valuable resources on projects that are not perceived as successful. Organisations must therefore be diligent on the way that projects are first of all selected and initiated and secondly on the way and manner projects are executed. Project must be selected to achieve the organisational vision and strategies.

Although there is a shift to measure the success of a project in relation to its benefits and user satisfaction, the original triple and quadruple constraints are still the most important criteria to measure success. Project managers must therefore be skilled and experienced to manage an IT project within the quadruple constraint of time, cost, scope and quality. Project managers cannot ignore these constraints and start focusing on the benefits of the project. That is the responsibility of either the programme managers or the project sponsor of the project.

The results further suggest that the factors that contribute to the success of an IT project is not some mystery or hidden factors. The factors contributing to the success of an IT project are fairly obvious and are addressed in the nine knowledge areas of the PMBoK® Guide of the Project Management Institute. The managerial implication is that organisations must ensure that IT project managers are well trained and educated in the discipline of project management.

The notion is that IT project managers are accidental project managers that were not trained for the position but are doing it because no one else can or will do it.

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**SERVICE QUALITY PERCEPTIONS IN THE UGANDA MOBILE TELEPHONE BRANCH OF
INDUSTRY**

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Abstract

Service providers need to align their service designs to users' expectations. To measure the providers' Gap 1 and users' 5 in the branch of industry in Uganda, the SERVQUAL Gaps model was used. Two samples and two research instruments were used too. CFA indicated poor specifications of models. The goodness-of-fit tests revealed poor fit of models to their data. The paired samples t-test indicated absence of Gap 5 while the independent samples t-test indicated existence of Gap1. Qualitative findings indicated that both Gaps 1 and 5 existed. Strategies were identified and recommendations made for possible adoption by providers.

Introduction

Uganda's services industry includes telecommunications, health, education, transportation, and financial services, to list only examples of the major service industries. In this research, the focus is on the mobile telephone services branch of the telecommunications industry in Uganda (Uganda Communications Commission 2005). Prior to 1996, Uganda's telecommunications infrastructure was among the least developed, not only in Africa, but also in global terms, with a teledensity of only 0.21 per one hundred citizens. Interestingly, by the end of 2009, the teledensity was 30 per one hundred citizens and the subscriber base had risen to approximately 9 million. With deregulation of the telecommunication services in Uganda in the mid 1990s, several mobile telephone service operators took the initiative to provide these vitally needed mobile communication services in Uganda. By December 2008, four providers, namely, MTN, UTL, ZAIN and WARID provided communication technologies in Uganda. Currently (2009), the technologies are used by seven mobile telephone service operators (providers), namely, Uganda Telecom Limited (UTL), Mobile Telephone Network (MTN), ZAIN, WARID Telecom, ORANGE Uganda Limited SMILE Telecom and I-Telecom to satisfy the augmented contemporary communications need of Ugandan users in the mobile telephone branch of industry (A Review of The Telecommunications Sector 2007:6; Status of the Communications Market, December 2008). Because ORANGE, SMILE and I-Telcom were launched after data collection, it was not possible to include them in this study.

It is important to note that Uganda is a multi-cultural and multi-lingual country. Altogether, there are 32 local languages spoken in Uganda. It should be noted that the multi-cultural and multi-lingual situation impacts the usage of service quality concepts in the different languages, leading to a possibility of many interpretations of the same concept. Further, it was not possible to translate the research instruments into each local language, a decision was made to conduct the investigation in English (Mpuga 2003). Because of the many local languages, it was considered prudent to adopt positivistic as well as phenomenological research methodologies to allow for a broader perspective of the research problem. This would also increase the validity of the research (Collis & Hussey 2009:85, 2003:76). Previous research findings singled out quality of services as the most important criterion among users' criteria for choosing mobile telephone services (World Wide Worx Report, phase 4, 2005:26). For this reason, Ugandan mobile telephone service providers need to continuously assess whether the quality of the designed service they offer matches clients' expectations. Corrective steps are required should there be a disparity between expected and actual levels of service quality. To have a better understanding

of the situation pertaining to service quality perceptions in the mobile telephone branch of industry in Uganda, the Gaps model of service quality by Parasuraman, *et al.* (1985) is useful to illustrate the potential service quality gaps. For the purpose of this research, the focus is on the providers' gap one and users' gap five to assess whether the providers' designed service quality meet clients' expected and actual levels of service quality in the mobile telephone services branch of industry in Uganda.

Problems investigated

With the continued growth of the deregulated mobile telephone services in Uganda, two key questions come to the fore: Firstly, are the users receiving the mobile telecommunications services they expect? Secondly, do the providers' perceptions of users' expectations mirror the users' real expectations on mobile telecommunications? The first question implies a potential disparity between users' expected and actual service quality while the second implies a potential disparity between providers' perceptions of users' expectations and what the users' real expectations are. The aforementioned disparities have been investigated in this research. Because the investigations were conducted in the official English language of Uganda despite its limited affiliation to the diversity of cultures and local languages of the respondents, the use of different research approaches becomes imperative. The question arises as to which research methodologies would be appropriate for this study in order to generate business strategies to address the potential shortcomings pertaining to the quality of mobile telephone services in Uganda?

Hypothetical models pertaining to gaps 1 and 5

Based on the problem statement, it is now possible to develop three hypothetical models for this research. The three hypothetical models are shown in Figures 1, 2, and 3. The constructs of Figures 1, 2, and 3 are based on an extensive analysis of secondary sources pertaining to service quality. It was noted that Uganda is a multi-cultural and multi-lingual country. Due to the multi-cultural and multi-language reality of the service environment of users and providers of mobile telephone services in Uganda, structural equation modeling (SEM) was used to test the relationships among the latent and observed variables in the hypothetical models. In order to use multiple sources of data, the strategy of methodological triangulation was adopted (Collis & Hussey 2009:85). SEM is a multivariate statistical technique for building and testing statistical models. It is a hybrid technique that encompasses aspects of confirmatory factor analysis, path analysis and multiple regressions to estimate a series of interrelated dependence relationships

simultaneously (Cooper & Schindler 2006:583). SEM implies a structure for the co-variances between observed variables, and accordingly it is sometimes called covariance structure modeling. LISREL (linear structural relations) and AMOS (analysis of moment structures) models are more commonly used by researchers using structural equation modeling (Stoelting 2002).

In this research AMOS 16.0 was adopted for analysing the SEM procedures. Given that the researcher had pre-specified hypothetical models to confirm or disconfirm and establish whether they should be accepted or rejected, confirmatory factor analyses (CFA) and goodness-of-fit tests were performed to assess the validity of the hypothetical models depicted in Figures 1 and 2. Figure 3 required a t-test to establish whether a disparity existed between users' expectations and the providers' designed service. SEM has two principal advantages over other multivariate techniques. Firstly, multiple and interrelated dependence relationships can be estimated simultaneously. Consequently, SEM as a general linear model can simultaneously estimate relationships between multiple independent, dependent and latent variables (unobserved concepts that are not measured directly). Secondly, SEM has the ability to incorporate latent variables into the analysis and account for measurement error in the estimation process (Cooper & Schindler 2006:584). As such, in contrast to other multivariate techniques, SEM allows the researcher to assess both measurement properties and test for key theoretical relationships in one technique.

Hypothetical model pertaining to potential disparity between users' expected and actual service quality (Gap 5)

Gap 5 of the SERVQUAL model depicts a potential disparity between expected and actual services experienced by the users of mobile telephone services in Uganda. Figure 1, indicates that the mobile telephone users' service quality (dependent variable) is influenced by seven independent variables. As stated, due to the multi-lingual service environment in Uganda, the impact of each independent variable on the dependent variable will be estimated through SEM procedures. Further, mobile telephone services to Ugandan users were investigated to establish whether a disparity existed between the expected and actual service quality in the branch of industry.

Hypothetical model pertaining to service quality as designed by mobile telephone providers

As shown in Figure 2, it is hypothesised that five independent variables impact on service quality as designed by the mobile telephone service providers.

FIGURE 1: Hypothetical model pertaining to potential disparity between users' expected and actual service quality (Gap 5)

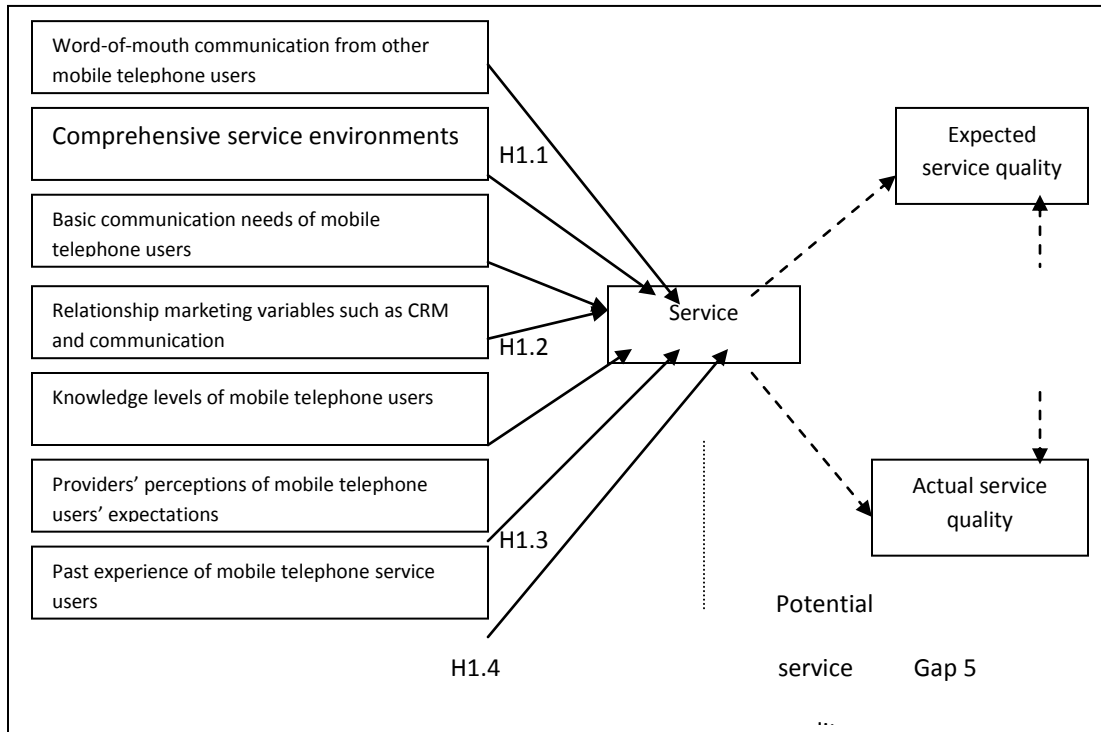
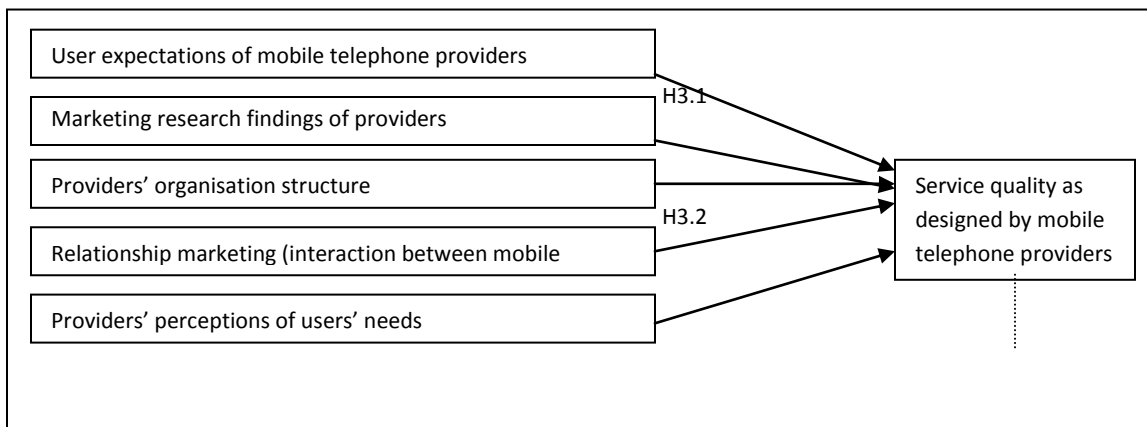


FIGURE 2: Hypothetical model pertaining to service quality as designed by Mobile telephone service providers



The five independent variables are: user expectations of mobile telephone providers, marketing research findings by mobile telephone providers, providers' organisation structure, relationship marketing (interaction between mobile telephone providers and users), and providers' perceptions of user needs. It is important to state that mobile telephone service quality expectations of users depicted in Figure 1 and mobile telephone service quality as perceived by providers depicted in Figure 2 represent the two dependent variables for this research. The relationship between the two dependent variables constitutes the components of Gap 1 shown in Figure 3.

Hypothetical model pertaining to potential Gap1

In the seminal publications of Parasuraman, *et al.* (1988, 1985), Gap 1 was described as the potential disparity between mobile telephone providers' understanding and designing of the service that mobile telephone users expect. In Figure 1, it is hypothesised that the seven independent variables impacted directly on the dependent variable (service quality). It is further hypothesised in Figure 2 that the five independent variables impact directly on the dependent variable (service quality as designed by mobile telephone providers).

FIGURE 3: Hypothetical model pertaining to potential disparity between users' service quality perceptions and service quality as designed by providers (Gap 1)

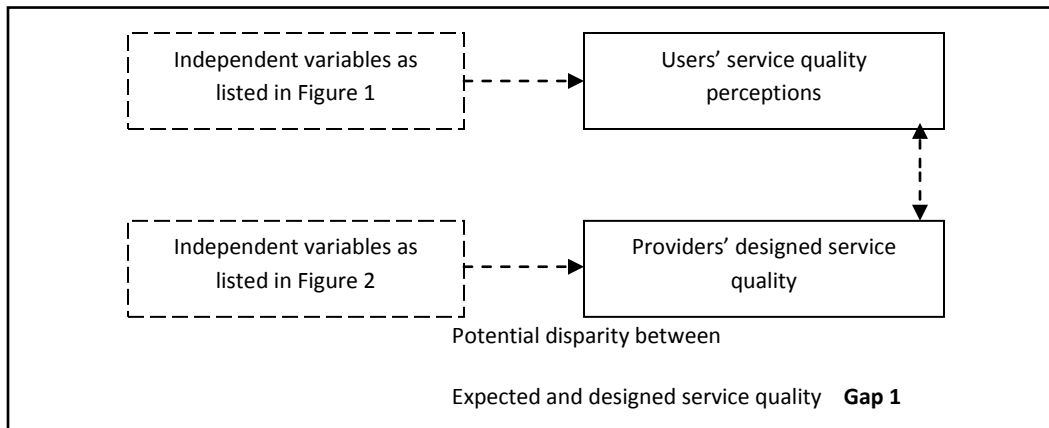


Figure 3 brings together the two dependent variables, where it is hypothesised that a disparity exists between users' service quality and service quality as designed by mobile telephone service providers in the branch of industry in Uganda, which is described as Gap 1 by Parasuraman, *et al.* (1988).

Hypotheses

Based on the three hypothetical models (Figures 1, 2 and 3) in this research, the following four sets of hypotheses were formulated to guide the investigations in this research. First set of hypotheses (Figure 1): Influence of the seven independent variables on users' service quality.

H1.1: "Word-of-mouth" communication from other mobile telephone users influences "service quality" of mobile telephone users.

H1.2: "Comprehensive service environments" influences "service quality" of mobile telephone users.

H1.3: "Basic communication needs" of mobile telephone users influence "service quality" of mobile telephone users.

H1.4: "Relationship marketing" influences "service quality" of mobile telephone users.

H1.5: "Knowledge levels of users" influences "service quality" of mobile telephone users.

H1.6: "Providers' perceptions of user expectations" influences "service quality" of mobile telephone users.

H1.7: "Past experience" with mobile telephone service influences "service quality" of mobile telephone users.

Second set of hypotheses (Figure 1): Potential disparity between expected and actual service quality of users in mobile telephone branch of industry in Uganda.

H2.O There are no disparities between "expected" and "actual" mobile telephone service quality to users.

H2.A There are disparities between "expected" and "actual" mobile telephone service quality to users.

Third set of hypotheses (Figure 2): Influence of five independent variables on service quality as designed by providers in the mobile telephone branch of industry in Uganda.

H3.1: "User expectations" awareness influence "service quality as designed" by mobile telephone providers.

H3.2: "Marketing research findings" influence "service quality as designed" by mobile telephone providers.

H3.3: "Provider organisational structure" influence "service quality as designed" by mobile telephone providers.

H3.4: "Relationship marketing (interactions between providers and users)" influence "service quality as designed" by mobile telephone providers.

H3.5: "Providers' perception of users' needs" influence "service quality as designed" by mobile telephone providers.

Fourth set of hypotheses (Figure 4): The potential disparities between service quality as expected by users and service quality as designed by providers in the mobile telephone branch of industry in Uganda.

H4.O: There is no disparity between users' "expected service quality" and "service quality as designed" by providers in the mobile telephone industry in Uganda.

H4.A: There is a disparity between users' "expected service quality" and "service quality as designed" by providers in the mobile telephone services branch of industry in Uganda.

Research methodology

Given the three hypothetical models and the operationalisation thereof, the positivistic approach will be supplemented by the phenomenological approach (Collis & Hussey 2003:47). The adoption of both paradigms is a pre-emptive measure against the possible effects of distortion because of a multi-cultural and multi-lingual service environment in which low levels of education are prevalent. It should be noted that due to the multi-languages in the Ugandan service environment and the general low levels of education, many interpretations of service quality concepts are possible. The aforementioned nature of the mobile telephone service environment requires the use of methodological triangulation strategies in which quantitative data are supplemented by qualitative data to enhance the validity of the study findings (Collis & Hussey 2009:85). The approaches and strategies described will enable the models to be empirically tested with a view of confirming service quality theory with regard to users' Gap 5 and providers' Gap 1 among users and providers of mobile telephone services in Uganda. Structural equation modeling was used through confirmatory factor analyses and goodness-of-fit tests.

Methods: *Sampling procedure and sample size*

Two sampling methods were considered appropriate for this study, namely, area sampling as the probability sampling method, and judgemental sampling as the non-probability sampling. The samples comprised 195 mobile telephone providers and 262 mobile telephone users. Two research instruments were used for this study; one to source users' perceptions and the other providers' perceptions of service quality. Interval data was involved in measuring the variables in the study. For the phenomenological part, three focus groups each comprising between six and ten participants was assembled for users and providers of mobile telephone services. For each focus group, an interview lasting between one to two hours was conducted and the resulting qualitative data analysed and reported. The purpose of group interviews was to benefit

from group dynamics on individual participants in giving their opinions. The research instruments that gathered data to measure variables pertaining to potential disparity between users' expected and actual service quality and providers' perceptions of users' expectations were constructed along the five (5) dimensions of service quality. The statements were linked to a five-point Likert-type interval scale anchored by "strongly disagree (1)" and "strongly agree (5)" (Kang & James 2004:270; Zeithaml *et al.* 1990:175-186). Individual users and providers were the units of analysis. As motivated for quantitative data collection, users and providers of mobile telephone services serve as the units of analysis. However, users and providers were organised in different focus groups to conduct focus group interviews. Different focus groups of users and providers were interviewed during the collection of qualitative data in the mobile telephone branch of industry in Uganda. The use of focus group interviews as a method of qualitative data collection is widely reported (Krueger 1998; McNamara 2008; Miles & Huberman 1994).

Reliability and validity of the measurement instruments

The quantitative research instruments were tested for reliability by interpreting the Cronbach alpha reliability coefficients of the scale items in the two instruments (Collis & Hussey 2003:58). The users' instrument had good internal consistency with all Cronbach's alpha reliability coefficients over 0.8 for both expected and actual service perceptions. The providers' instrument revealed acceptable Cronbach's alpha reliability coefficients ranging between 0.67 and 0.71. Structural equations modeling (SEM) was used to test the theory through confirmatory factor analysis (CFA) and goodness-of-fit tests. The CFA established whether the users' and providers' models met the required minimum specifications. For a well specified model, each of the independent variables needs to have a minimum of three statements (scale items) with factor loadings (pattern coefficients) of ≥ 0.70 to be considered for further analysis. The goodness-of-fit tests established whether the researchers' models fitted their sub-sample data. The goodness-of-fit tests determine if the model being tested should be accepted or rejected. Goodness-of-fit tests were performed for the users' and providers' hypothetical models in Figures 1 and 2. In this research, multiple linear regression analysis were performed to firstly, assess whether the identified seven independent variables impacted on service quality rendered to users of mobile phones in Uganda. Secondly, it was used to assess whether the identified five independent variables impacted on service quality, as designed by the providers of mobile telephone services in Uganda. The paired samples t-test indicated that the users' Gap 5 was non-existent while the independent samples t-test indicated existence of the providers' Gap1 in the mobile telephone branch of industry in Uganda. Qualitative findings were used to verify

quantitative results on both Gaps 1 and 5 among users and providers of mobile telephone services in Uganda. Strategies were identified and recommendations made for possible adoption by providers of mobile telephone services in the branch of industry in Uganda.

Empirical results

Confirmatory factor analysis (CFA) for users' expected service quality: The confirmatory factor matrix for users' expected service quality based on the minimum pattern coefficient (factor loading) threshold value of 0.7 appears in Table 1. The pattern coefficients (factor loadings) represent the correlation coefficients between the variables (rows) and factors (columns). The challenge is to interpret the pattern coefficients (factor loadings) worth considering.

TABLE 1: Confirmatory factor analysis – users' expected service quality

Scale item Number *	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
	Word of mouth	Service environment	Relationship marketing	Knowledge levels	Providers' perceptions of users' needs	Past experiences
A1	0.814					
A2	0.828					
A3	0.739					
A4	0.714					
B1		0.789				
B2		0.824				
B4		0.748				
B5		0.770				
D2			0.785			
D4			0.793			
D5			0.813			
E2				0.729		
E3				0.801		
E4				0.770		
E5				0.751		
F1					0.762	

G1						0.723
G2						0.778
G3						0.863
Variance explained	57.57	58.15	59.43	55.11	36.43	57.55
Eigenvalues	2.87	2.9	2.98	2.76	1.82	1.85
Cronbach's alphas	0.927	0.927	0.926	0.927	0.927	0.927

Loadings ≥ 0.7 and variances ≥ 0.5 were considered significant

Hair *et al.* (2003) provide a rule of thumb as an approach for making a preliminary assessment of the factor matrix. Factor loadings larger than 0.30 are considered to meet just the minimum level; loadings of approximately 0.40 are considered more important; and loadings of 0.50 or greater are considered as practically significant. For assessing the validity of the measuring instrument when doing a confirmatory factor analysis, it was stated that the pattern coefficients must be 0.70 or higher (Schumacker & Lomax 2004:212). Therefore the larger the absolute size of the pattern coefficients, the more important the loading when interpreting the confirmatory factor matrix. Table 1 shows that the factor “past experience” had only one item which loaded on it, while the factor “basic communication needs” had none. By convention a factor needs to have one or more loadings for inclusion in the regression analysis. The values of the Cronbach’s alpha reliability coefficients in Table 1 indicate that they are all greater than 0.9 which reflects good internal consistency of the scale items in the users’ research instrument that assessed their expectations of mobile telephone service quality. The construct validity of the scales may be regarded as good. Table 1 also shows that Eigen values were ≥ 1 , indicating the variance the independent variables exerted on the dependent variable. Table 1 also indicates that except for the variables “past experience” with a variance explained of 36.43 per cent and “basic communication needs” which were not significant, the variance explained in the dependent variable by the other five independent variables ranges between 55 to 59 per cent.

By convention, independent variables require to explain 50 per cent variance or more of the dependent variable to be included in the specified model. Except for the variable “past experience” that explained only 36.4 per cent of the variance in the dependent variable, which is below the threshold value of 50 per cent, the balance of the independent variables explained more than 50 per cent of the variance in the dependent variable. The results show that the

variance in the dependent variable was adequately explained by the six independent variables. Table 1 further shows the magnitude of the variance in the dependent variable each item of the independent variable explained. Some scale items were below the threshold value for inclusion in the pattern coefficients. The fact that half the scale items did not obtain significant factor loadings, indicate a model specification problem with regard to users' expectations of service quality.

Confirmatory factor analysis (CFA) of users' actual service quality

For the confirmatory factor analysis pertaining to users' actual service quality, the same procedure as for users' expected service quality was followed. Table 2 shows the CFA matrix for users' actual service with the pattern coefficients (factor loadings) that represent the correlation coefficients between the variables (rows) and factors (columns).

TABLE 2: Confirmatory factor analysis – users' actual service quality

Scale item number *	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
	Word of mouth	Service environment	Basic comm.. needs	Relationship marketing	Knowledge levels	Providers' perceptions of users' needs	Past experience
A1	0.805						
A2	1.295						
A4	0.908						
A5	0.752						
B1		0.722					
B2		0.790					
B3		0.734					
B4		1.001					
C2			0.776				
C3			0.864				
C5			0.734				
D2				1.055			
D3				0.723			
D5				0.784			
E1					0.798		

E2					1.098		
E3					0.715		
F1						0.838	
G1							0.968
G2							0.810
G4							0.916
Variance explained	61.11	60.51	38.30	60.37	57.41	39.05	59.35
Eigenvalues	3.93	3.01	2.31	3.14	2.97	2.01	3.23
Cronbach's alphas	0.821	0.806	0.807	0.813	0.816	0.803	0.808

Loadings ≥ 0.7 and variance explained of ≥ 0.5 were considered significant

As was the case for users' expectations scores, some independent variables had only two items which loaded. The same factor loading threshold value of ≥ 0.7 was applied in the CFA for users' actual service quality. From Table 2 it is clear that except for the variable "providers' perceptions of users' expectations" where only one item loaded, the other six independent variables obtained three or more item-loadings, thus meeting the minimum requirements to be included in the regression analysis. However, except for the variables 'basic communication needs' and 'providers' perceptions of users' that had one item-loading, the other five variables each obtained two item-loadings. It should be noted that given the good Cronbach's alphas, the variance explained in the dependent variable by each factor was low ranging between 38 and 61 per cent. The highest variance explained was obtained by the variable 'word-of-mouth communication' (61 %) and the lowest variance explained by "basic communication needs" (38 %). According to secondary sources, variance explained in the dependent should be ≥ 50 per cent. The Eigen values ≥ 1 that accounted for the proportion of the explained variance have been indicated in Table 2. The Cronbach's alpha scores of ≥ 0.8 showed good internal consistency of the scale items. As reflected in the CFA for actual service quality, certain service quality dimensions were not understood by the users in evaluating mobile telephone services.

Confirmatory factor analysis (CFA) of providers' designed service quality

The confirmatory factor analysis of the providers' designed service quality is depicted in Table 3. As motivated for users' "expected" and "actual" service quality, CFA for the providers' designed service quality was based on factor loadings of ≥ 0.7 . The CFA factor matrix for providers'

designed service quality in Table 3 shows the pattern coefficients (factor loadings) representing the correlation coefficients between the variables (rows) and factors (columns). As was motivated for the users' model hypothetical model, the providers' model specification requires that a variable must obtain three or more item-loadings of ≥ 0.7 in order to be included in the empirical model. Table 3 shows that three of the five independent variables met the minimum requirement of three or more item-loadings to be considered for further analysis namely 'clients' expectations', 'marketing research', and 'relationship marketing'. The variables organisation structure' and 'perceptions of clients' needs' did not meet the minimum requirement of three item-loadings of ≥ 0.7 . The findings imply that the providers' hypothetical model in Figure 1 is not well specified. The findings on Cronbach's alpha reliability coefficients in Table 3 indicate that except for the variable "marketing research findings" with an alpha value of 0.703, all the other variables scored alpha values of less than 0.70.

TABLE 3: Confirmatory factor analysis – providers' designed service

Scale item number*	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
	Clients' expectations	Marketing research findings	Organisation structure	Relationship marketing	Perceptions of clients' needs
A1	0.799				
A2	0.850				
A4	0.822				
A5	0.762				
B1		0.760			
B2		0.786			
B3		0.737			
B5		0.763			
C2			0.789		
C3			0.915		
D1				0.728	
D3				0.703	
D5				0.858	
E3					0.716

Variance explained	60.91	54.94	57.91	54.81	44.01
Eigenvalues	3.04	2.75	2.9	2.75	2.2
Cronbach's alphas	0.694	0.703	0.688	0.692	0.676

Loadings ≥ 0.7 and variance explained of ≥ 0.5 were considered significant

The alpha values reflect weak internal consistency of the scale items in the providers' research instrument which also reflects poor construct reliability. Table 3 also shows Eigen values ≥ 1 which indicate the proportion of the variance explained in the dependent variable. Further, Table 3 indicates the explained variance between 44 and 60 per cent for each independent variable.

Multiple regression

Empirical evidence is available to motivate why "actual experience" scales are the most applicable to assess service quality (Cronin & Taylor 1992:64; Boulding, *et al.* 1993:24). On the basis of the aforementioned, only the "actual experiences" scales were used in the multiple regression analysis. With reference to Table 4, the users' hypotheses will be tested.

TABLE 4: Regression weights for the users' estimated model

Parameters	Estimate	Standard error of estimates	t-value	P
Word-of-mouth	-0.500	0.169	-2.960	0.003***
Business environment	0.756	0.169	4.476	0.000***
Basic communication skills	0.430	0.169	2.547	0.011**
Relationship marketing	0.292	0.169	1.728	0.084**
Knowledge levels	0.292	0.169	1.732	0.083**
Providers' perceptions	0.173	0.169	1.024	0.306
Past experience	0.841	0.169	4.983	0.000***

*** = $p < 0.01$ ** = $p < 0.1$

Testing of hypotheses (users)

H_{1.1}: "Word-of-mouth" from other mobile telephone users influences "service quality" of mobile telephone users.

A statistically significant negative relationship between "word of mouth" and "service quality"

of mobile users ($p < 0.01$) was found. $H_{1.1}$ is not rejected. Therefore, the null hypothesis is rejected. There is thus sufficient evidence at the 99 per cent level of significance to support the alternative (directional) hypothesis.

$H_{1.2}$: *“Comprehensive business environments” influences “service quality” of mobile telephone users.*

A statistically significant positive relationship between “comprehensive business environments” and “service quality” of mobile users ($p < 0.01$) is reported. $H_{1.2}$ is not rejected. Therefore, the null hypothesis is rejected. There is thus sufficient evidence at the 99 per cent level of significance to support the alternative (directional) hypothesis.

$H_{1.3}$: *“Basic communication needs” of mobile telephone users influence “service quality” of mobile telephone users.*

A statistically significant positive relationship between “basic communication needs” and “service quality” of mobile users ($p < 0.1$) was found. $H_{1.3}$ is not rejected. Therefore, the null hypothesis is rejected. There is thus sufficient evidence at the 90 per cent level of significance to support the alternative (directional) hypothesis.

$H_{1.4}$: *“Relationship marketing” influences “service quality” of mobile telephone users.*

A statistically significant positive relationship between “relationship marketing” and “service quality” of mobile users ($p < 0.1$) was found. $H_{1.4}$ is not rejected. Therefore, the null hypothesis is rejected. There is thus sufficient evidence at the 90 per cent level of significance to support the alternative (directional) hypothesis.

$H_{1.5}$: *“Knowledge levels” of mobile telephone users influences “service quality” of mobile telephone users.*

A statistically significant positive relationship between “knowledge levels” and “service quality” of mobile users ($p < 0.1$) was reported. $H_{1.5}$ is not rejected. Therefore, the null hypothesis is rejected. There is thus sufficient evidence at the 90 per cent level of significance to support the alternative (directional) hypothesis.

$H_{1.6}$: *“Providers” perceptions of user expectations’ influences “service quality” of mobile telephone users.*

No statistically significant relationship was found between “providers” perceptions of user expectations’ and “service quality” of mobile users ($p < 0.1$). $H_{1.6}$ is rejected. Therefore, the null hypothesis is not rejected. There is thus insufficient evidence to support the alternative (directional) hypothesis.

$H_{1.7}$: *“Past experience” with mobile telephone service influences “service quality” of mobile telephone users.*

A statistically significant positive relationship between “past experience” and “service quality” of mobile users ($p < 0.01$) was reported. $H_{1.7}$ is not rejected. Therefore, the null hypothesis is rejected. There is thus sufficient evidence at the 99 per cent level of significance to support the alternative (directional) hypothesis.

Testing of hypotheses (providers)

Table 5 shows the regression values for the providers’ model and the interpretation of the tested hypotheses thereof.

H3.1: *“User expectations” awareness influences “service quality as designed” by mobile telephone providers.*

Table 5 reveals that there is no statistically significant relationship between “user expectations” and “service quality as designed” by mobile telephone providers. H3.1 is rejected. Therefore, the null hypothesis is not rejected. There is thus insufficient evidence to support the alternative (directional) hypothesis.

TABLE 5: Regression weights for the estimated providers’ model

Parameters	Estimate	Standard error of estimates	t-value	P
User expectations	0.180	0.141	1.27	0.202
Marketing research findings	0.107	0.141	0.75	0.449
Providers’ organisation structure	0.755	0.141	5.35	0.000***
Relationship marketing	0.486	0.141	3.44	0.000***
Providers’ perceptions of users’ needs	0.594	0.141	4.20	0.000***

*** = $p < 0.01$

H 3.2: *“Marketing research” influences “service quality as designed” by mobile telephone providers.*

A statistically significant relationship between “marketing research” and “service quality as designed” by mobile telephone providers could be found. H3.2 is rejected. Therefore, the null hypothesis is not rejected. There is thus insufficient evidence to support the alternative (directional) hypothesis.

H_{3.3}: *“Provider organisational structure” influences on “service quality as designed” by mobile telephone providers.*

Table 5 reports a statistically significant positive relationship between “provider

organisational structure” and “service quality as designed” by mobile providers ($p < 0.01$). H3.3 is not rejected. Therefore, the null hypothesis is rejected. There is thus sufficient evidence at the 99 per cent level of significance to support the alternative (directional) hypothesis.

H3.4: *“Relationship marketing (interaction between providers and users)” influences “service quality as designed” by mobile telephone providers.*

Table 5 indicates a statistically significant positive relationship between “relationship marketing” and “service quality as designed” by mobile providers ($p < 0.01$). H3.4 is not rejected. Therefore, the null hypothesis is rejected. There is thus sufficient evidence at the 99 per cent level of significance to support the alternative (directional) hypothesis.

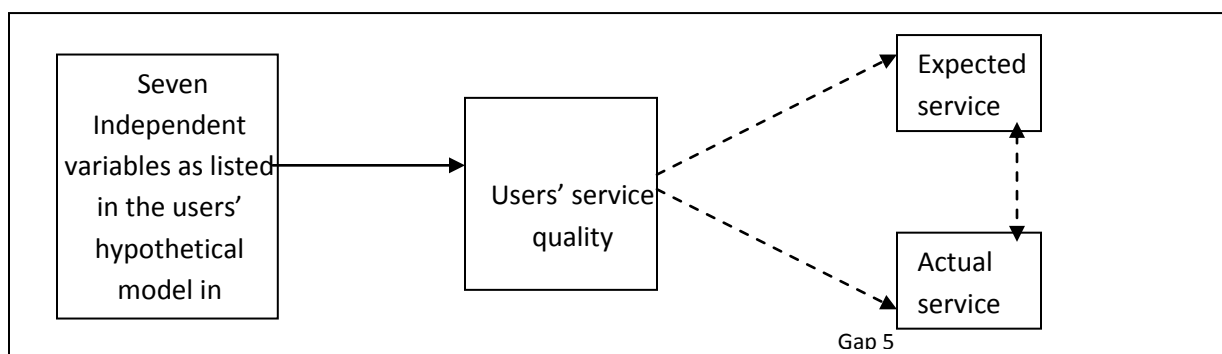
H3.5: *“Providers” perceptions of users’ needs’ influences “service quality as designed” by mobile telephone service providers.*

A statistically significant positive relationship between “providers” perceptions of users’ needs’ and “service quality as designed” by mobile providers ($p < 0.01$) was found. H3.5 is not rejected. Therefore, the null hypothesis is rejected. There is thus sufficient evidence at the 99 per cent level of significance to support the alternative (directional) hypothesis.

Paired samples T-test

Equal variances were assumed for this t-test due to pooled estimates of variance of scores from the same respondents for the two service quality perceptions. The paired samples statistics indicate that the means are 18.75 (expected service) and 18.82 (actual service) with a mean difference of -0.0725 and significance of service) 0.74.

FIGURE 4: Paired samples t-test results on users’ Gap 5



Given that the threshold value for significance is ≤ 0.05 , the t-test results indicated that disparity between users’ expected and actual service quality (users’ Gap 5) in the mobile telephone branch

of industry in Uganda is not significant as illustrated in Figure 4.

Second set of hypotheses (users): Potential disparity between expectations and perceptions of actual service quality of mobile telephone services in Uganda

H2.0: There are no disparities between “expected” and “actual” mobile telephone service to users.

The findings reveal that there is no significant relationship between “expected” and “actual” mobile telephone service to users ($p < 0.05$). H2.0 is not rejected. Therefore, the alternative (directional) hypothesis is rejected. There is thus sufficient evidence at the 95 per cent level of significance to support the null hypothesis. To establish whether a disparity existed between expected and actual service quality of users of mobile telephone services in the branch of industry in Uganda, a paired samples T-test was performed. This result implies that mobile telephone users in Uganda do not perceive a difference between the services they expected and the actual service rendered by their service providers.

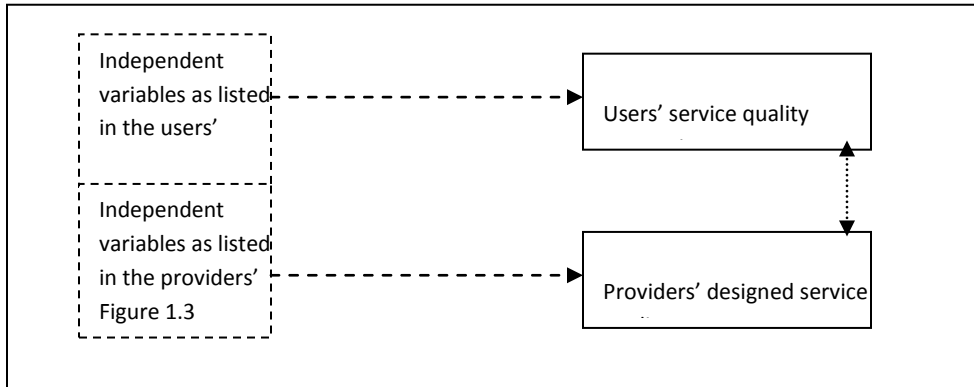
Independent samples t-test

To establish whether a disparity existed between users’ expectations of the designed service and providers’ perceptions of the users’ expectations of the designed (providers’ Gap 1), an independent samples t-test was performed. The test was based on unequal variance assumption since the data came from two different samples. The group statistics indicated that the mean for the users’ expectations sample of 262 respondents was 18.7519 and the providers’ perceptions of users’ expectation sample of 195 respondents 21.0462. The mean difference for users’ equal variances assumed sample was -2.2942 with a t-value of -8.038; and for the providers’ equal variance not assumed sample was -2.2942 with a t-value of -8.452. The significance column indicated that both means were significant at the 99 per cent level. This result implies that a disparity exists between users’ expectations and providers’ perceptions of the users’ expectations i.e. the providers’ Gap 1 exists between users’ expectations and providers’ perceptions of the users’ expectations in the mobile telephone service branch of industry in Uganda as depicted in Figure 5.

Fourth set of hypotheses (providers): Potential disparity between expected service quality and service quality as designed by providers of mobile telephone services in Uganda.

H_{4.0}: *There is no disparity between users' "expected service quality" and "service quality as designed" by providers in the mobile telephone services branch of industry in Uganda.*

FIGURE 5: Independent samples T-test results on providers' Gap 1



The findings report a significant disparity between users' *expected service quality and service quality as designed* by mobile providers ($p < 0.05$). H_{4.0} is rejected. Therefore, the null hypothesis is rejected. There is thus sufficient evidence at the 95 per cent level of significance to support the alternative (directional) hypothesis. The difference in the means implies that users expect less from the providers while providers think they are offering more than users expect to receive. The t-values for both samples' variances are greater than the threshold value of ≥ 2 further confirming the existence of Gap 1. Further, the difference reflects providers' failure to understand their clients' expectations as depicted in Figure 5.

Goodness-of-fit of the users' model

A Root Mean Square Error of Approximation (RMSEA) test gave results as indicated in Table 6. By convention, good models have an RMSEA of ≤ 0.05 . Models whose RMSEA is ≥ 0.10 have a poor fit. However, RMSEA can be misleading for small degrees of freedom and small samples. This disadvantage does not apply in this research since the users' sub-sample of 262 respondents was not small. From the results in Table 6.11, it is clear that RMSEA for the users' estimated (default) model is 0.254 which implies that the hypothetical model (Figure 1) could not be confirmed.

TABLE 6: Root Mean Square Error of Approximation (RMSEA) test

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.254	0.237	0.272	0.000
Independence model	0.247	0.232	0.262	0.000

Goodness-of-fit of the providers' model

A Root Mean Square Error of Approximation (RMSEA) test gave results as indicated in Table 7. As stated earlier, good models have an RMSEA of ≤ 0.05 .

TABLE 7: Root Mean Square Error of Approximation (RMSEA) test

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.133	0.109	0.157	0.000
Independence model	0.133	0.114	0.152	0.000

Models whose RMSEA is ≥ 0.10 have a poor fit. However, RMSEA can be misleading for small degrees of freedom and small samples. This disadvantage does not apply in this research since the providers' sub-sample of 195 respondents was not small. From the results in Table 7, it is clear that RMSEA for the providers' estimated (default) model is 0.133 which implies that the model (Figure 2) could not be confirmed.

Conclusions

Qualitative findings indicated that the users' Gap 5 existed between users' expected and actual service thus verifying the presence of Gap 5 contrary to quantitative results which indicated the absence of the same Gap. Both quantitative and qualitative findings indicated that the providers' Gap 1 existed between providers' perceptions of users' expectations and users' expectations.

Strategic implications for mobile telephone service managers

Several business level strategies can be pursued to close providers' Gap 1 and the users' Gap 5 in the mobile telephone branch of industry in Uganda. Given the low incomes of most users of mobile telephone services in Uganda, a "no frills" business strategy will be able to meet the expectations of the majority of the users in this type of economic environment with the basic communication services. As most Ugandan mobile telephone service users belong to the low

income segment, some providers may also choose to charge lower prices than rivals for good quality service offerings. For this strategy to succeed there must be a low cost base. With the intensity of rivalry increasing each year in Uganda (four providers in January 2009 and five in March 2009), price competition is inevitable among rivals in the branch of industry, thus justifying the viability of a low price business strategy for quality services. Providers may use a broad differentiation strategy by being unique to a wide range of users' needs and preferences that cannot be satisfied by a standard offering. Although there are diverse ways of broad differentiation, providers may use marketing-based promotional approaches such as power of the brand to demonstrate how their services meet users' needs better than rivals' brands. Providers may choose to niche in a special smaller profitable sub-segment where they have a competitive advantage by meeting unique expectations of mobile telephone users in Uganda. Mobile telephone service providers may also use one of the service growth strategies by meeting expectations of more users in the current market segment (market penetration); meeting new expectations of users in the current market segment (service development/market extension); meeting expectations of new users with current services (market development); and meeting new expectations of use users (diversification). However, the growth strategies attract different levels of risk as one moves from market penetration to diversification strategy and mobile telephone service providers in Uganda should take note of such a fact.

Future research

No comparable research findings are available in underdeveloped countries and it is therefore recommended that this research be replicated in a country that mirrors the cultural profile of Uganda. A similar study may be conducted in other branches of the service industry in Uganda.

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SERVICE QUALITY DIMENSIONS: THE CASE OF AN INDEPENDENT SCHOOL

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ABSTRACT

Independent schools have become an integral part of the educational landscape in South Africa. As profit-orientated organisations, they satisfy a specific need for parents and learners and service quality is critical to their success. Service quality has long been the focus of research in services' marketing due to its effects on consumer satisfaction, customer loyalty and financial success.

The purpose of this research was to determine perceptions of service quality and the appropriateness of the identified service quality dimensions among parents of an independent school. While various dimensions of service quality have been identified, the applicability and appropriateness of these dimensions have not been investigated in the private school context.

Use was made of quantitative research. A census was conducted among the parents of an independent high school in Gauteng using a self-completion questionnaire. A total of 171 usable responses were received for analysis.

A factor analysis indicated that the tangibles dimension of service quality is the only common dimension that exists while the other statements dimensions form new dimensions.

1. INTRODUCTION

In the post 1994 era, the South African Constitution (Republic of South Africa 1996:14) allows all learners, for the first time, the right to equal education and this has given rise to an increasing number of independent schools being established. It is suggested that there has been an increase of 42.9% from 2000 to 2008 in the number of learners in independent schools (Kruger, 2009). There is now a wider choice of schools and learners no longer have to attend the school closest to where they reside. Instead they may choose a school that will fulfil their social, economic, academic and cultural needs (Davies & Ellison, 1991:75).

Satisfying the needs of customers is, however, not a once off event in any service environment and it is therefore up to the service provider to ensure customer satisfaction leads to customer retention (Söderlund & Rosengren, 2008:552). If the customer's needs are not met, they may defect to another service provider. In the case of a school it means that learners may enrol at a particular school but if their requirements and needs are not met, they may switch to another school. Considering that it takes five times as much time and money to attract a new customer than to keep an existing one, (Christopher, 1992:38), schools, especially profit-driven independent ones, must ensure that they satisfy customer needs. This places the focus on the importance of service quality in the school context, specifically an independent school.

Service quality has been the focus of many studies in many different industries, including the public service (Wisniewski, 2001), tourism (Saleh & Ryan, 1992; Fick & Ritchie, 1991) and the motor industry (Bouman & van der Wiele, 1992) and the medical environment (Priporas, Laspa & Kamenidou, 2008; de Jager & du Plooy, 2007; Mostafa, 2005).

Despite the variety of industries in which service quality has been investigated, there has been little published research regarding the application of the service quality principles and dimensions in the area of school education, and it is this gap that the study wishes to address.

This paper will discuss the nature of the independent schools and examine the place of service quality in this context. The results and implications of a study into service quality in this context will be presented.

2. PROBLEM INVESTIGATED

As a result of increased competition amongst independent schools in South Africa (Hofmeyr & Lee, 2008:5), it is becoming increasingly important that the perceptions of parents regarding service quality is taken into account as part of the strategic planning process. As with any other service provider, the independent school also has to make sure the message of exceptional quality and value for money is communicated to ensure that a positive perception of the service is created (Harris, 2007:11 - 12). This poses the following research question: What are perceptions of service quality among parents of learners at an independent school?

3. RESEARCH OBJECTIVES

The primary objective of this study is to investigate the service quality perceptions of parents and the dimensions of service quality an independent high school in Gauteng.

The secondary objectives of the research are:

- To determine the perceptions of service quality of parents in an independent high school in Gauteng
- To determine the service quality dimensions in this context.

4. LITERATURE REVIEW

4.1 The term “an independent school”

ISASA (Independent School Association of South Africa) refers to Section 29 of the Constitution of South Africa and states that anybody in South Africa may establish an independent educational institution, provided the school does not discriminate on the basis of race and that it is registered with the state. In addition, the independent school “must maintain standards not inferior to those of comparable public institutions” (ISASA, 2009:1). Erasmus (1995:7) defines an independent (private) school as one that does not get a subsidy from the Government and therefore it is not considered to be a public (sector) school. Currently there are approximately 700 schools affiliated to ISASA (Kruger, 2009) and this is approximately one third of all independent schools in South Africa. As they do not receive a subsidy from the state, they charge tuition fees for the services offered to learners, which impacts the perceptions of service quality.

4.2 The task of a school as an educational institution

The school as a service provider has a primary responsibility to learners and an indirect

responsibility to parents and the community in a broader sense (Castle & Estes, 1995:4-5). Louw (1986:220) states that schools exist to help learners to develop cognitively, emotionally and socially. According to Holmes and Wynne (1989:10 – 11) the basic functions of a school include the following four tasks:

- Providing learners with basic skills such as reading, writing and arithmetic.
- Introducing and exposing learners - in varying degrees of success - to different disciplines of knowledge.
- Preparing young adults for their future - be this to engage in further studies or to enter the working environment.
- Acting as a custodian for learners during compulsory school years, which in South Africa, at present, is up to 15 years of age.

4.3 Reasons why parents send their children to independent schools

The following arguments are offered by Erasmus (1995:16 – 18) as well as Hofmeyr and Lee (2009:5 - 7) as reasons for the existence of independent schools in the South African context:

- **Religious reasons** where independent schools are created to cater for specific religious needs that may not be fulfilled in government schools (supported by Glatter, Woods & Bagley, 1997:97). This would, for example, be Yeshiva College that caters exclusively for Jewish learners with a very strong emphasis on Limudei Kodesh (Jewish Religious Education).
- **Tradition** contributes to the continued existence of many independent schools. These schools, where tradition receives a great emphasis, include schools such as Hilton College (established 1872), Durban Girls' College (1877) and St John's College in Johannesburg (1898) and are some of the first independent schools to be established in South Africa and therefore have long and cherished traditions.
- Parents may feel that by their children attending an independent school their prestige or superior position in society will be enhanced (**social reasons**). This apparent snobbish view has traditionally been held by the parents who send their children to the independent schools in South Africa which were founded on the same elitist principles as those in England. These were the original private or independent schools in South Africa (Randall, 1982:4).
- Parents may feel the need to enrol their children in an independent school which supports their values, culture or language better than what is offered in state schools (**cultural reasons**). Examples may include Saheti School (South African Hellenic Educational and

Technical Institute) on the East Rand that places great emphasis on the Greek culture, the German Schools that maintain very strong bonds with their counterparts in Germany, sometimes even bringing in teachers from Germany, and Helpmekaar Privaat Kollege, one of few Afrikaans independent schools in South Africa.

- Parents often send their children to an independent school when they are unhappy with the services offered by state schools, with independent schools **as the alternative to state schools**. Reasons for dissatisfaction may include high teacher-pupil ratios, a high failure rate or perceived low academic standards (Glatter et al., 1997:96) or any number of other reasons such as a need for a more supportive environment, personalised attention and supportive staff (May, 2006:25, 28). It is, however, important to note that to assume all state schools offer a service that is of a lesser quality than those of independent schools would be a misconception.
- A further motivation could be the demand for **internationally recognised exams** such as IEB-exams (Independent Examination Board) offered by a large number of independent schools.

Further reasons offered by Kruger (2009) include operational issues such as smaller classes and a lack of confidence in the education system.

4.4 Service Quality

Service quality is not a new concept, as evident in literature from as early as the 1960's and 1970's when people like Gustafson and Ricard (1964), Stephenson and Willet (1969) and Heskett (1971) started paying attention to the concept of service quality in their research (Cronin, 2003:332).

Zeithaml, Berry and Parasuraman (1996:35) describe service quality as “the extent to which a service meets or exceeds customer expectations”. This definition implies that service quality should be judged by looking at customers' expectations regarding service delivery (before the service encounter) and how this compares to their perceptions, judgment or attitudes relating to the superiority of the service that is formed during and after services are rendered. If the service expectations and service perceptions do not correspond, the “gap theory” applies. This “gap theory” indicates a difference between the expectations and perceptions of the customer (Ganesan-Lin, Russell-Bennet & Dagger, 2008:550).

4.4.1 The different approaches to service quality

Researchers in the field of services marketing and service quality are in agreement that service quality is a multi-dimensional concept. Literature on the nature of service quality can be divided into two broad streams, namely those that support the European (or Nordic) approach and the second stream that follows the American view on service quality (Kang & James, 2004:266).

- The European service quality model: Kang and James (2004:267-268) refer to the European perspective as the Grönroos-service quality model. This approach to service quality proposes three dimensions of service quality, i.e. a functional dimension, a technical dimension and the image of the business that acts as a filter of how the customer experiences the service quality. The *functional dimension* in the Grönroos model refers to the *how* of service delivery, i.e. the process of service delivery. The second component refers to the *technical* quality which is equated to the outcome of the service delivery, i.e. *what* was received (Kang & James, 2004:267). The third aspect relating to service quality in this model states that if the customer has a positive *image* of the organisation, the service experience is seen in a positive light.
- The American service quality model: Parasuraman, Zeithaml and Berry are seen as the developers of the American perspective (Kang & James, 2004:267-268). This approach to service quality focuses exclusively on the functional dimension (the *how*) of the Grönroos model. Parasuraman, Zeithaml and Berry (1985:47) originally suggested that there are ten dimensions to service quality, namely reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding and tangibles. These ten dimensions were later reduced to five by said authors, also known as the RATER approach (Ladhari, 2008:66).
 - **Reliability:** The ability of the service provider to deliver the promised service accurately, on time and in a consistent manner.
 - **Assurance:** The ability of staff to inspire trust and confidence based on their knowledge.
 - **Tangibles:** Physical facilities, communication material, equipment as well as aspects such as the appearance of employees
 - **Empathy:** Individualised attention given to customers through clear and appropriate communication channels.
 - **Responsiveness:** Willingness of the service provider to assist with problems and to adapt to changing customer needs.

Research by Cronin and Taylor (1992), Kellog and Chase (1995) and Soteripou and Chase (1998) as quoted in Ganesan-Lin et al. (2008:551) suggests that different types of services may have different service quality dimensions attached to them. The quality perception of the particular service may depend on the nature of the service, the level of interaction that takes place during the service delivery process and the degree to which the service delivery is adapted to suit the needs of the customer.

4.4.2 The role of service quality in an independent school

There are a number of roles that service quality plays in an independent school.

- Service quality plays a role in focusing on the needs of parents and the pupils. A school, as with any other business, has to establish what the wants and needs of the consumers in the target market are and then deliver on these needs in a manner that will exceed expectations in order to create total customer satisfaction (Kotler, 2003:73). However, the school does not only have to establish what the needs of parents are, but also assess the perceptions of parents regarding the satisfaction of these needs (Davies & Ellison, 1991:59).
- Service quality impacts parent satisfaction. In the case of the independent school, the value system as well as the professionalism of staff, the quality of facilities, and the parents' feelings of being looked after can impacts satisfaction. There is also the question of the satisfaction of the learners themselves in school (Hanson, 1996:55).
- Service quality also impacts loyalty of the parents. If the service quality perception of parents in the independent school is not positive, parents may decide to remove their children from the school (Hill, Lake & Celio, 2002:35).
- Service quality also impacts the financial situation of the organisation. As an independent school is a profit-orientated organisation, it is necessary for it to provide service quality to ensure that parents do not remove their children.

4.4.3 Measuring service quality

SERVQUAL and SERVPERF were two instruments considered for this empirical research. SERVQUAL (measuring the quality of the service) is a generic instrument developed by Parasuraman et al. (1985) to assess service expectations and to measure perceived service satisfaction. SERVQUAL is a differential tool that measures the difference between service expectations and the service outcome (Ganesan-Lin et al., 2008:550). The differences (gap) between expectations and perceptions can then be used to improve service levels across a number of service categories (Ladhari, 2008:66). SERVQUAL makes use of four to five

statements per service dimension and this usually adds up to 21 statements where respondents choose an option on a Likert scale that varies from strongly agree to strongly disagree (Ladhari, 2008:66).

Cronin and Taylor (1992:127) argue that SERVQUAL should be substituted with SERVPERF that focuses only on the perceptions of the performance of the service delivery. This means that SERVPERF only considers actual service delivery perceptions of the performance because it is assumed that customers will rate the service after they have already, consciously or sub-consciously, compared performance perceptions with performance expectations.

Followers of the Grönroos-approach to service quality criticise SERVQUAL because it only focuses on measuring one dimension (functional) of the quality of the service delivery and the role of the final (technical) outcome and the image of the business are not factored into the equation (Kang & James, 2004:268 and Ladhari, 2008:75 - 76). Buttle (1996: 3) points out that despite the popularity of SERVQUAL and a widely held view that it is a valid instrument for measuring service quality, it has been criticised on both a theoretical and operational level.

Despite the criticism of SERVQUAL, this study uses an adapted version of SERVQUAL in an independent school environment. The first reason for using SERVQUAL is the adaptable nature of the instruments across a variety of industries. The second reason for using SERVQUAL (i.e. service expectations as well as service perceptions) rather than SERVPERF, is the lack of information about what parents view as important in the independent school environment in South Africa. It was thus felt that it is important from a managerial point of view to first determine how important service quality expectations are for different service elements in order to put the quality of service perception (or lack thereof) in context. Despite measuring both expectations and perceptions of parents, this paper reports on the perceptions only.

Other measures of service quality (such as Topsis and the Loss Quality method) have been developed for specific situations, such as medical and tourism services, but to date, no adapted instrument has been applied in a school context.

5. HYPOTHESES

Based on the literature discussed above, the following hypotheses can be identified.

Hypothesis 1

An independent school does not get a subsidy from the state (Erasmus, 1995:7) thus charging school fees which are higher than those charged at state-subsidised schools. As parents pay school fees, if parents are not satisfied with the quality of education and service offered, they can remove their children and place them in another school. This places pressure on the school to offer a high level of service quality on all established SERVQUAL dimensions. Thus,

Hypothesis 1: perceptions of parents in the identified independent school have positive perceptions regarding the service quality offered by this specific school.

Hypothesis 2

Five dimensions were proposed by Parasuraman (1985). Research into the dimensions of service quality has identified different dimensions in different contexts, and there has been debate regarding the number of service quality dimensions. It has been suggested by Asubonteng, McCleary, and Swan, (1996:75) that not only are the dimensions of service quality industry specific, but that it is important to determine the dimensions for the specific industry in which they operate. Thus,

Hypothesis 2: the dimensions of service quality identified previously in the literature can also be identified in this context.

6. RESEARCH METHODOLOGY

All parents of pupils at an independent school were invited to participate in a 23-item self-completion survey designed to determine expectations and perceptions concerning their child's school, thus use was made of a census. No incentives were offered to the participants in the research.

The survey included established Likert scales for measuring the expectations and perceptions. These statements were based on a previous studies conducted by Pararuraman, Zeithaml and Berry (1988) and Parasuraman et al. (1985), but were adapted to the independent school context. The research instrument comprised three sections. Section A collected demographic information on the respondents, Section B determined the perceptions of service quality using a five point Likert scale while Section C evaluated the relationship quality between the parents and the school (which does not form part of this paper).

In this research, a self-administered questionnaire was distributed to parents electronically via email or hard copy to make it convenient for the parents to choose their preference of responding. The questionnaire contained a covering letter describing the purpose of the research. Parents were assured that the research would be treated as confidential and that they would remain anonymous. Parents could return the questionnaires either electronically, per fax or via hard copy (personally or via their child) to the researcher anonymously in a sealed box provided.

7. RESULTS OF THE RESEARCH

7.1 Response rate

As can be seen in Table 1, 580 questionnaires were distributed of which 171 usable responses were received, a response rate to 29.48%. The detail is provided in Table 1.

Table 1 Response rate

No of questionnaires sent out	580
No of questionnaires received	198 (34% of those sent out)
Usable questionnaires	171 (29.48% of those sent out)

7.2 Reliability

Statements relating to service quality had a Cronbach Alpha of 0.925. According to Sekaran (2003:306), a Cronbach Alpha can be used to indicate the degree to which items measuring concepts, correlate to one another. A Cronbach Alpha of 1 shows a perfectly positive correlation between items. Sekaran (2003:306) argues that a Cronbach Alpha of 0.7 or more is indicative of a reliable instrument. From Table 2 it can be seen that statements on all of the dimensions can be regarded as reliable. The Reliability dimension had a Cronbach Alpha of 0.680, which is still regarded as satisfactory (Malhotra, 2007:285).

Table 2 Reliability of the instrument per dimension

SERVQUAL Dimension	Cronbach Alpha
Reliability	0.680
Tangibles	0.765
Assurance	0.727
Responsiveness	0.808
Empathy	0.849

7.3 Respondent profile

The majority of respondents were between 40 and 49 (76%), 71.2% were female, 37.7% had a post-graduate qualification and 76.1% had one child attending the school. There is a spread across the respondents regarding the length of their association with the independent school. A summary of the respondent profile can be found in Table 3.

Table 3 Respondent profile

Characteristic	Distribution
Age	0.6% aged 30-34, 6.6% aged 35-59, 34.7% aged 40-44, 41.3% aged 45-49, 12.0% 50-54 while 4.8% were 55 or older
Gender	28.2% male; 71.2% female
Education	10.8% had matric; 24.0% had a certificate or diploma, 27.5% had an undergraduate qualification while 37.7% had a postgraduate qualification.
Length of time associated with the school	16.7% less than 1 year, 18.5% more than 1 year but less than 2 years, 15.9% more than 2 years but less than 3 years, 18.1% more than 3 years but less than 4 years, 17.2% for more than 4 years but less than 5 years and 12.8 for 5 years or longer
Number of children at the school	76.6% had 1 child while 23.4% had 2 children. No respondent had more children at the school when the research was undertaken

7.4 Hypothesis testing

Hypothesis 1:

Hypothesis 1: perceptions of parents in the identified independent school have positive perceptions regarding the service quality offered by this specific school.

The research had as its objective, determining the perceptions of parents of the service quality offered by the specific independent school using a 5 point Likert scale. The responsiveness dimension had the highest mean score (4.39), while the tangibles dimension had the lowest mean score of 4.11. The mean scores on each of the dimensions are summarised in Table 4.

Table 4 Mean scores regarding service quality perceptions.

Reliability	4.31
Tangibles	4.11
Assurance	4.27
Responsiveness	4.39
Empathy	4.18
Mean perception score:	4.25

The statement with the highest individual mean was found in both the reliability (The school delivers error-free academic records) and tangibles (the academic staff are professional in appearance) dimensions, with a mean score of 4.48. The statement with the lowest mean was found in the tangibles dimension (Sport facilities are of a good standard), with a mean score of 3.50. The standard deviations on each statements range between 0.628 and 0.895. The means and standard deviations on each statement can be found in Annexure A.

From the mean scores above, all are above 4, indicating that for this specific independent school, the dimensions of service quality are positively perceptive. Hypothesis 1 is thus accepted.

Hypothesis 2

Hypothesis 2: the dimensions of service quality identified previously in the literature can also be identified in this context.

A factor analysis was conducted to determine the dimensions of service quality in this context and the extent of their similarity with dimensions identified in other contexts. The results of the factor analysis extracted five factors using the Principal Axis Factoring-methodology. In total five factors account for 63.46% of responses. Refer to Table 5.

Table 5 Eigenvalues associated with the factors of service quality

Factor	% of Variance	Cumulative %	Cronbach Alpha
Factor 1	39.262	39.262	0.886
Factor 2	7.908	47.170	0.893
Factor 3	6.583	53.753	0.733

Factor 4	5.147	58.899	0.603
Factor 5	4.558	63.457	-

The factors extracted were renamed as follows:

Factor 1 – Customer Care

This factor covers mostly empathy and responsiveness elements, which refers to the respondents’ perception of care shown by the school, while delivering the service. It also includes, to a lesser extent, factors related to elements of assurance in the adapted SERVQUAL. This factor accounts for 39.262% of the responses. This makes it the dominant factor in this factor analysis. The Cronbach Alpha for the first factor extracted was 0.886.

Factor 2 – Service Delivery

Factor two deals with the quality of service respondents experience, i.e. one statement related to tangibles (the quality of the academic material) and two statements each covering reliability (timeliness) of response to requests and honouring promises), assurance (the ability of the academic staff to deliver the subject matter and install confidence) and empathy (the staff’s ability to understand learners’ needs and act in their best interest). The Cronbach Alpha this extracted factor was 0.893.

Factor 3 – Tangibles

This factor covers the perception of respondents regarding tangible aspects such as physical facilities, sports facilities and technology that form part of the service delivery. Factor three has a Cronbach Alpha of 0.733.

Factor 4 – Customer Focus

Factor 4 relates to the perception of respondents regarding the quality of the service they receive from the administrative department of the school, as well as the appearance of the academic staff. This factor has a Cronbach Alpha of 0.603, which is below the acceptable level of 0.7 but which is still regarded as satisfactory.

Factor 5 – Reliability

This “factor” contained only one statement and hence it is not possible to determine a Cronbach Alpha for this factor. It is thus not really regarded as a factor per se.

Refer to Annexure B for the detailed Factor analysis.

From the factor analysis, four dimensions were identified and the composition of these factors is not consistent with the theoretical dimensions. The tangible dimension was identified in this school context, however the other dimensions did not agree with those previously identified in the literature. Thus hypothesis 2 cannot be accepted.

8. DISCUSSION

From a *managerial perspective*, the study provides management with a better understanding of parents' perceptions regarding service quality in this school. This means that management are able to make the necessary changes in these aspects in order to affect the perceptions of the parents. While the perceptions of the parents are generally positive, there are still aspects about which perceptions are not as positive.

Specific managerial actions suggested include:

- A follow up investigation on the issues that were identified by respondents as problematic in terms of perceptions by holding focus groups. This will enable management to do an in-depth investigation into the problem issues.
- Improved communication with parents not being aware", this can be addressed via improved communication with parents.
- Various physical facilities are lacking and funds permit, these facilities should be upgraded as a matter of priority.
- Improving skills of both administrative and academic staff in order to improve the service quality offered to parents and learners.

Limitations associated with the research include the fact that there is limited information available in the literature on the subject of independent schools in South Africa. This has also been identified as a global phenomenon. No research has been undertaken into service quality in independent schools, and as such, a comparison with previous studies is thus not possible. In addition, the results from this study are only representative of the one school that participated in this study. The results can therefore not be viewed as representative of independent schools in Gauteng nor in South Africa.

For *future research*, it is necessary to repeat this study at more independent schools in Gauteng and in South Africa. If one looks more specifically at the research undertaken, different factors in

terms of service quality have been identified than what was part of the original SERVQUAL instrument. Considering that this was the first study of this nature undertaken in an independent school environment in South Africa, further research needs to be undertaken to verify these factors.

9. CONCLUSION

The independent school, like any profit-orientated organisation needs to include a service quality focus. This means providing a high level of service quality to the parents, learners and the community. The parents currently perceive the independent school positively, though areas for improvement can be identified. A factor analysis indicated that the tangibles dimension exist in this context, while the statements associated with the other dimensions did not link clearly to the existing service quality dimensions of SERVQUAL.

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Annexure A Mean scores and Standard deviations on SERVQUAL dimensions

Service Quality Dimensions	Statements	Mean	Std. Deviation
Reliability	When a promise is made by the school, the promise is honoured.	4.27	0.730
	Academic staff's response to requests is of a high quality.	4.19	0.766
	Administrative records are error-free.	4.30	0.793
	The school delivers error free academic records.	4.48	0.749
	Mean:	4.31	
Tangibles	The physical facilities of the school are neat.	4.14	0.781
	Technology used in the academic environment is state of the art.	4.05	0.868
	Sport facilities are of a good standard.	3.50	0.895
	Educational material provided is of a high quality.	4.38	0.708
	The academic staff are professional in appearance.	4.48	0.628
	Mean:	4.11	
Assurance	The behaviour of academic staff inspire confidence as educators.	4.30	0.810
	Academic staff provide quality education in the class rooms.	4.34	0.654
	Staff members are qualified to coach extra mural activities.	4.00	0.739
	Staff act with integrity when dealing with confidential matters.	4.45	0.741
	Mean:	4.27	
Responsiveness	Academic staff are available for extra lessons if the learner needs help with subject related issues.	4.33	0.796
	The school is pro-active in communicating with parents regarding problem issues.	4.42	0.828
	Continuous feedback is given on the academic progress of my child / children.	4.27	0.876

	When a problem is experienced, the staff are prepared to assist to solve the problem.	4.38	0.741
	Administrative staff respond promptly to requests for assistance.	4.53	0.673
	Mean:	4.39	
Empathy	Learners receive individualised attention.	4.15	0.852
	Educational counselling staff are prepared to assist when a learner experiences a personal problem.	4.16	0.785
	Staff have learners' best interest at heart.	4.22	0.740
	Academic staff give positive feedback to parents when it is merited.	4.27	0.764
	Staff understand the specific needs of the learner(s).	4.11	0.792
	Mean:	4.18	

Annexure B Detailed Factor Analysis Groupings for service quality

SERVQUAL dimension	Description	Loading on factor				
		1 Customer care	2 Service delivery	3 Tangibles	4 Customer focus	5 Reliability
Empathy	Learners receive individualised attention.	0.723				
Responsiveness	The school is proactive in communicating with parents regarding problem issues.	0.713				
Responsiveness	Continuous feedback is given	0.638				

	on the academic progress of my child / children.					
Responsiveness	Academic staff are available for extra lessons if the learner needs help with subject related issues.	0.599				
Empathy	Academic staff give positive feedback to parents when it is merited.	0.591				
Responsiveness	When a problem is experienced, the staff are prepared to assist to solve the problem.	0.575				
Empathy	Educational counselling staff are prepared to assist when a learner experiences a personal problem.	0.521				
Assurance	Staff members are qualified to coach extra mural activities.	0.469				
Assurance	Staff act with integrity when dealing with	0.417				

	confidential matters.					
Assurance	The behaviour of academic staff inspire confidence as educators.		0.733			
Reliability	Academic staff's response to requests is of a high quality.		0.666			
Tangibles	Educational material provided is of a high quality.		0.632			
Empathy	Staff understand the specific needs of the learner(s).		0.618			
Assurance	Academic staff provide quality education in the class rooms.		0.604			
Empathy	Staff have learners' best interest at heart		0.582			
Reliability	When a promise is made by the school, the promise is honoured.		0.497			
Tangibles	The physical facilities of the school are neat.			0.720		
Tangibles	Technology used in the academic			0.700		

	environment is state of the art.					
Tangibles	Sport facilities are of a good standard.			0.437		
Reliability	Administrative records are error-free.				0.634	
Tangibles	The academic staff are professional in appearance.				0.417	
Responsiveness	Administrative staff respond promptly to requests for assistance.				0.349	
Reliability	The school delivers error free academic records.					0.732

CUSTOMER COMPLAINT BEHAVIOUR: AN EXPLORATORY STUDY AMONG RESTAURANT PATRONS

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ABSTRACT

Although businesses try to achieve high levels of customer satisfaction, service failures do occur due to human involvement in service production and consumption. Since restaurants face severe competition, extra effort should be made to retain customers, especially those who experience service failures. Unfortunately, most dissatisfied customers do not complain to restaurant staff, opting to rather complain to others or to defect to competitors. Restaurants should therefore encourage customers to complain as it is only when customer complaints are properly understood, that effective complaint handling and service recovery can be implemented. The purpose of this exploratory study was to determine restaurant patrons' complaint behaviour. Non-probability convenience sampling was used to gather data from 360 restaurant patrons in Gauteng and the North West Province. Findings indicate that although differences were noted between different groups based on demographic characteristics in terms of individual complaint actions, groups do not differ in their overall complaint behaviour.

INTRODUCTION

Crane and Sujan (2004: 3) argue that businesses should maintain high levels of service quality, as poor service could reduce repeat business. However, despite organisations' best intentions to achieve service environments with zero defects, it may be difficult, even impossible (Sparks & Fredline, 2007: 241). Mueller, Palmer, Mack and McMullan (2003: 396) and Mattila and Patterson (2004: 336) attribute the difficulty to guarantee 100% customer satisfaction to the multi-dimensional nature of service encounters, while Thøgersen, Juhl and Poulsen (2003) add that customers themselves may contribute to not being satisfied with service delivery, since customers' expectations and experiences are subjective perceptions that vary from person to person. Restaurants in particular should strive to offer their customers satisfactory service, together with effective service recovery in the event of a service failure, as it is extremely difficult for restaurants to sustain a competitive advantage (Enz, 2008: 73-78) in an ever-increasingly competitive restaurant industry (Ladhari, Brun & Morales, 2008: 563)

Jones, McCleary and Lepisto (2002: 105) therefore explain that, although restaurants try to achieve high levels of customer satisfaction, service failures do occur that will result in customer dissatisfaction. For restaurateurs to rectify failures, they have to receive feedback from their customers (Jones *et al.*, 2002: 105). Unfortunately, not all customers complain (Wilson, Zeithaml, Bitner & Gremler, 2008: 373), thereby creating the illusion that all is well and that they are satisfied (Ngai, Heung, Wong & Chan, 2007: 1387). Dissatisfied customers may, however,

complain to others, thereby spreading negative word-of-mouth, or defect to competitors (Ndubisi & Ling, 2007: 9; Ngai *et al.*, 2007: 1387) instead of offering businesses opportunities to not only rectify the problem, but also to improve service delivery (Ngai *et al.*, 2007: 1389; Thøgersen *et al.*, 2003).

It is therefore essential that businesses, and restaurants in particular, encourage customers to complain as it is only when customer complaints are properly understood that effective complaint handling and service recovery can be implemented, thereby possibly improving customer perceptions of service quality, reducing negative word-of-mouth communications, increasing customer satisfaction and retention and ultimately improving profitability (Ngai *et al.*, 2007: 1389; Yuksel, Kilinc & Yuksel, 2006: 11; Thøgersen *et al.*, 2003).

The aim of this paper is to explore customer complaint behaviour together with the influence of demographic characteristics and patronage behaviour on complaint behaviour among restaurant patrons following a service failure.

LITERATURE REVIEW

Service failure

Service industries are realising the importance of satisfying customer needs as this is vital for customer retention and therefore the survival of a business (Sigala, 2005: 409; Choi & Chu, 2001: 289). Sparks and Fredline (2007: 241), Mattila and Cranage (2005: 271) and La and Kandampully (2004: 390) suggest that even though businesses increasingly seek flawless delivery of services to satisfy customer needs, it is virtually impossible in a service setting due to the multi-dimensional nature of service encounters. The human involvement in service production and consumption and the inseparable and intangible nature of services will inevitably lead to service failures (Palmer, Beggs & Keown-McMullan, 2000: 513). Hess (2008: 387) and Sparks and Fredline (2007: 242) explain that whenever customer expectations are not met, or when something has gone wrong pertaining to the delivery of a service, a service failure is experienced.

Hess (2008: 387) propounds that businesses must understand the severity of the service failure, since this will influence how dissatisfied customers are, as the more severe the service failure, the more dissatisfied customers will be. Cranage (2004: 211) states that businesses should identify areas where service failures occur in order to determine the possible severity of the

failure. For this reason, Jones *et al.* (2002: 105) suggest that businesses should encourage customers to engage in complaint behaviour, since this is the only way in which businesses will become aware of customer dissatisfaction.

Customer complaint behaviour

Customer complaint behaviour (CCB) refers to the actions customers take to communicate a negative aspect of a product or service (Jacoby & Jaccard quoted by Ngai *et al.*, 2007: 1377) or a situation that did not meet their expectations (Kim & Lynn, 2007: 336). Wilson *et al.* (2008: 373) and Lovelock and Wirtz (2007: 391) classify the actions that customers can adopt into three categories, namely taking some form of public action (including complaining to the business, complaining to a third party or taking legal action), taking some form of private action (including switching to a competitor or negative word-of-mouth communication), and taking no action.

Wilson *et al.* (2008: 373) suggest that not all customers complain. Kitapci and Dortyol (2009: 934), Lovelock and Wirtz (2007: 392) and Boshoff and du Plessis (2009: 340) support this view by indicating that research has shown that as little as 5% to 10% of dissatisfied customers complain. Boshoff and du Plessis (2009: 340), Wilson *et al.* (2008: 373), and Lovelock and Wirtz (2007: 391) provide the following reasons why customers do not complain: they see complaining as a waste of time and effort, they think that nothing will come from complaining, that no one will care about the problem or be willing to rectify it, they fear being victimised or being embarrassed should they complain, or they do not know how or where to complain. Customers who do complain, in contrast, do so for a number of reasons (Wilson *et al.*, 2008: 373; Lovelock & Wirtz, 2007: 391; Hoffman & Bateson, 2006: 367), including: to express their anger as emotional release at the organisation, personnel or service delivery process that resulted in their dissatisfaction, to obtain some form of apology or compensation for a resultant economic loss, to improve the service by providing feedback that could lead to service improvement, as social responsibility to prevent other customers from experiencing the same failure or situation, or because they believe they deserve the service they are paying for.

Although some businesses shy away from customer complaints (Hoffman & Bateson, 2006: 367) as it can be time consuming, irritating, costly and can negatively affect the business' reputation if the press becomes interested in the complaint (Thøgersen *et al.*, 2003), complaints can be used as a competitive advantage if handled correctly. Thøgersen *et al.* (2003) explain

that businesses benefit from complaints in that they receive valuable feedback from customers. Kotler and Keller (2009: 406) seem to agree that businesses benefit from complaints by claiming that businesses that encourage customers to complain have achieved greater revenues and profits than those who do not have a systematic approach to deal with complaints resulting from service failures. This can probably be attributed to, by allowing customers to complain following a service failure, businesses being afforded the opportunity to implement service recovery strategies that could result in increased customer satisfaction, loyalty and retention (Choi & Mattila, 2008: 24; Ngai *et al.*, 2007: 1376).

Service recovery

Service recovery refers to all the efforts businesses undertake to rectify or respond to a service failure and aims to move the customer from a state of dissatisfaction to satisfaction (Sparks & Fredline, 2007: 242; Hocutt, Bowers & Donovan, 2006: 199). Sparks and Fredline (2007: 242) and Wong (2004: 958) suggest that the main service recovery strategies that businesses can implement, include apologising and acknowledging the mistake, fixing the problem and providing the customer with some form of monetary compensation. Of these strategies, De Run and Ting (2006: 96) suggest that offering an apology is the most commonly used in the restaurant industry.

Even though customer complaints provide businesses with the opportunity to engage in service recovery, which could lead to increased satisfaction and retention, many businesses fail to utilise this opportunity, thereby causing even more frustration and dissatisfaction for the customer (Yuksel *et al.*, 2006: 11; DeWitt & Brady, 2003: 193). Lewis and McCann (2004: 6-17) explain that ineffective service recovery implies that the customer has been let down for a second time. This could lead to the customer defecting to a competitor, losing confidence in the business, and the spreading of negative word-of-mouth. Effective service recovery, in contrast, could potentially lead to an even higher level of satisfaction than what the customer would have experienced if a service failure did not take place (Schoefer, 2008: 216; Lorenzoni & Lewis, 2004: 12; Baron & Harris, 2003: 64).

PROBLEM STATEMENT, OBJECTIVES AND RESEARCH HYPOTHESES

The literature review can be summarised by DeWitt and Brady (2003: 193) who explain that the objective of complaint management is to lessen or eliminate any damage done by a service failure and, ultimately, through effective service recovery, to retain a once dissatisfied customer

to continue supporting the business instead of defecting to a competitor. Customer retention is especially significant in the restaurant industry, where Grindy (quoted by Jones *et al.*, 2002: 121) claims that 60% to 80% of sit-down restaurants' sales come from repeat customers.

Despite realising the importance of retaining customers, restaurateurs find it increasingly difficult to do so in an industry that is characterised by intense competition where the growth in the number of restaurants surpasses demand (Enz, 2008: 73-78; Ladhari *et al.*, 2008: 563; Dutta, Venkatesh & Parsa, 2007: 351-363). The severe pressure for survival in the industry is supported when considering that 26% of independent restaurants fail within the first year of operation and almost 60% within three years (Parsa, Self, Njite & King, 2005: 311).

One particular area in which restaurants can create a competitive advantage is by offering service recovery to customers who experience a service failure – something particularly prevalent in the restaurant industry (De Run & Ting, 2006: 95; Mattila & Patterson, 2004: 336). It is therefore imperative that restaurants encourage customers to complain when experiencing a service failure, thereby creating an opportunity to effectively recover from the failure. Offering effective service recovery could potentially lead to higher levels of customer satisfaction, loyalty and retention (Schoefer, 2008: 216; Lorenzoni & Lewis, 2004: 12; Baron & Harris, 2003: 64) – effectively providing the restaurant a competitive advantage in this highly competitive industry.

The purpose of this study is to examine restaurant patrons' complaint behaviour by specifically considering their demographics and patronage behaviour, as it is believed that people with different demographic characteristics tend to engage in different kinds of complaint behaviour (Ngai *et al.*, 2007: 1387).

The following *objectives* are formulated for the study:

- To examine likely complaint behaviour in the event of restaurant patrons not being completely satisfied when visiting a restaurant; and
- To determine whether significant differences exist between different respondent groups based upon their demographic characteristics (gender, marital status and age) and their patronage behaviour (spending and patronage patterns) with regard to their likely complaint behaviour when they are not completely satisfied when visiting a restaurant.

The following *hypotheses* were formulated for the study:

- H₁: Males and females differ significantly in terms of their likely complaint behaviour when they are not completely satisfied when visiting a restaurant.
- H₂: Restaurant patrons with different marital statuses differ significantly in terms of their likely complaint behaviour when they are not completely satisfied when visiting a restaurant.
- H₃: Restaurant patrons of different ages differ significantly in terms of their likely complaint behaviour when they are not completely satisfied when visiting a restaurant.
- H₄: Restaurant patrons who spend different amounts on average at a restaurant differ significantly in terms of their likely complaint behaviour when they are not completely satisfied when visiting a restaurant.
- H₅: Restaurant patrons who go to restaurants during different times of the day and week differ significantly in terms of their likely complaint behaviour when they are not completely satisfied when visiting a restaurant.

RESEARCH METHODOLOGY

Sample and data collection

The target population for the study was defined as restaurant patrons living in Gauteng and the North West Provinces. In total, 360 useable questionnaires (Gauteng, n=180; North West Provinces, n=180) were collected for analysis. An interviewer-administered survey was used to collect data from restaurant patrons who have visited a restaurant within a three-month period prior to the commencement of the study. Questionnaires were fielded by trained fieldworkers among the target population.

Measuring instrument

The questionnaire consisted of several sections. The first section served as an introduction as it explained the intent of the survey and contained screening questions to ensure only those who patronised restaurants in the preceding three months participated in the study. Subsequent sections measured respondents' restaurant patronage behaviour, likely complaint behaviour when not completely satisfied when visiting a restaurant and perceptions regarding the severity of service failures experienced at restaurants. The final section collected respondents' demographic information.

Structured questions were used to elicit responses. The questionnaire included multiple choice questions where respondents had to indicate their preference from a number of options. In a number of questions respondents were able to select more than one option. A multiple-item, labelled, five-point scale was furthermore used to measure respondents' likely complaint behaviour. Respondents had to indicate the likelihood that they will respond in a certain way when not completely satisfied when visiting a restaurant. Responses were captured on a scale of 1 to 5, where 1 is 'very unlikely' and 5 represents 'very likely', for seven statements measuring likely complaint behaviour. The questionnaire was pre-tested before it was fielded among the target population of the study.

Data analysis

This paper provides descriptive statistics, reports the distribution of results for the seven statements measuring likely complaint behaviour and concludes by reporting the findings for the hypotheses formulated for the study (H_1 to H_5). For the purposes of hypothesis testing, marital status, originally measured by means of five categories, was collapsed into three categories. Age was collapsed into three categories, time of day a restaurant is visited into two categories and average spending into two categories.

Two parametric tests were conducted to test the hypotheses. Independent sample t-tests were used to determine whether significant differences exist between two groups (gender, average spent and time of day a restaurant is visited) and a One-way Analysis of Variance (ANOVA) was performed in order to determine whether significant differences exist between the means of more than two groups (marital status and age) with regard to the means scores obtained for each of the statements measuring the likely complaint behaviour. A Duncan's Multiple Range Test was used as a Post Hoc Test to identify the groups between which significant differences can be observed when equal variances can be assumed. Dunnett's T3 test identifies the groups between which significant differences are evident when equal variances cannot be assumed and Scheffe's test identifies the groups when equal variances can be assumed (Eiselen, Uys & Potgieter, 2007: 124). The authors relied on a 95% level of confidence, or a 5% level of significance. A p-value of ≤ 0.05 therefore indicates a significant difference between mean scores.

RESULTS

Sample profile and restaurant patronage behaviour

More males (63.9%) participated in the study than females (36.1%). Respondents indicated that they were either married or living with someone (52.2%), single (40.8%) or divorced, separated or widowed (6.9%). Concerning respondents' age groups, most were younger than 30 years old (42.2%), between 30 and 49 (36.2%) or 50 years old and older (21.67%). Table 1 provides an exposition of the restaurant patronage behaviour of respondents who participated in the study.

Table 1: Respondents' restaurant patronage behaviour

Aspects considered when selecting a restaurant (more than one option could be selected)	Frequency	Percentage
Type of restaurant (e.g. fast food; sit-down; family restaurant)	226	62.8%
Type of food offered (e.g. seafood, steaks, hamburgers)	248	68.9%
Quality of the food	249	69.2%
Variety offered	79	21.9%
Price	196	54.4%
Reputation of the restaurant	113	31.4%
Atmosphere	210	58.3%
Service	200	55.6%
Location (e.g. in a mall or in a suburb)	78	21.7%
Whether the restaurant is well known	32	8.9%
Specials offered	86	23.9%
Entertainment for children	40	11.1%
Other	3	0.8%
The time of day restaurants are most often visited	Frequency	Percentage
During office hours (Monday to Friday)	40	11.1%
In the evening (Monday to Friday)	122	33.9%
Over weekends	198	55.0%
Total	360	100.0%
Average spent per visit to a restaurant	Frequency	Percentage
Less than R50	17	4.7%
R50-R99	71	19.7%

R100-R200	115	31.9%
More than R200	157	43.6%
Total	360	100.0%

From Table 1 it can be deduced that respondents consider the quality of food (69.2%), type of food offered (68.9%), type of restaurant (62.8%), atmosphere (58.3%), service (55.6%) and price (54.4%) as the most important aspects when selecting a restaurant. The least number of respondents considered the notoriety of the restaurant (8.9%) and entertainment for children (11.1%) as important in their choice of restaurant. Respondents patronise the restaurant they usually go to mostly over weekends (55%), to a lesser extent on weekday evenings (33.9%) with the minority going during weekday office hours (11.1%). The majority of respondents spend on average more than R200 when going to a restaurant (43.6%) followed by those who spend R100 to R200 per visit (31.9%).

Likely complaint behaviour

Table 2 provides an overview of the *likely complaint behaviour* of respondents with regard to seven statements representing likely complaint behaviour when they were not completely satisfied following a service failure when visiting a restaurant (e.g. if the food did not meet their expectations). From Table 2 it is evident that the statement '*I will tell my friends/family not to use the restaurant*' obtained the highest overall mean indicating that this is the most likely complaint behaviour respondents will consider with a mean score of 2.44 out of a possible 5. This followed by '*I will complain to the waiter*' (mean score = 2.42) and '*I will not use the restaurant again*' (mean score = 2.39). The statement '*I will write a letter to a newspaper about my ordeal*' seems as the most unlikely response when not completely satisfied with a mean score of 1.19.

Table 2: Likely complaint behaviour

Statement	Mean score*	Standard deviation
I will not use the restaurant again	2.39	0.847
I will tell my friends/family not to use the restaurant	2.44	0.842
I will ignore the incident and do nothing	1.53	0.810
I will complain to the waiter	2.42	0.844
I will complain to the manager	2.20	0.897

I will complain to the owner/franchisor	1.71	0.847
I will write a letter to a newspaper about my ordeal	1.19	0.489

* where 1 = very unlikely and 5 = very likely

Distribution of Results

Although not imperative to do so (since the sample size is larger than 30 – Eiselen *et al.*, 2007: 79), it was decided to determine whether the results obtained for each of the statements measuring respondents' likely complaint behaviour show a normal distribution prior to discussing the results of the hypotheses tests. The kurtosis and skewness of the results for each of the seven statements presented in Table 2 were examined.

West, Finch and Curran (1995: 74) explain that a statement where the skewness of the distribution is less than 2.00, or where the kurtosis of the distribution is less than 7.00, falls within acceptable limits of normality. Six statements fall within these limits. The last statement, '*I will write a letter to a news paper about my ordeal*' exhibits a skewness of more than 2.00. The distribution is heavily skewed towards a response of 'very unlikely'. This is, however, quite plausible as respondents seemed overall fairly unlikely to complain (when considering the mean scores of all seven statements as presented in Table 3) and since this statement represents a fairly rash reaction to an unsatisfactory visit to a restaurant. Based on this reasoning, and since normality is not mandatory when the sample size exceeds 30, it was decided to retain the final statement. Based on these findings, parametric tests were used to test the hypotheses formulated for this study (Independent sample t-test and a One-way ANOVA).

Hypotheses testing

The following results were obtained with regard to each of the hypotheses formulated for the study.

H₁: Males and females differ significantly in terms of their likely complaint behaviour when they are not completely satisfied when visiting a restaurant.

The results of the Independent samples t-tests indicate that significant differences exist between males and females for two of the seven statements measuring likely complaint behaviour when they are not completely satisfied when visiting a restaurant. Females are significantly more

likely to ignore the incident and do nothing (mean score =1.59) as compared to males (mean score = 1.42; p-value = 0.039), while males (mean score = 2.39) are significantly more likely to complain to the manager than females (mean score = 2.09; p-value = 0.002). Table 3 provides an exposition of the results.

Table 3: Significance testing for the mean scores for likely complaint behaviour for the different genders for each statement

Statement	Females (mean score*)	Males (mean score*)	Independent sample t-test (p-value)
I will not use the restaurant again	2.34	2.48	0.144
I will tell my friends/family not to use the restaurant	2.39	2.53	0.125
I will ignore the incident and do nothing	1.59	1.42	0.039**
I will complain to the waiter	2.40	2.47	0.456
I will complain to the manager	2.09	2.38	0.002**
I will complain to the owner/franchisor	1.67	1.80	0.156
I will write a letter to a newspaper about my ordeal	1.19	1.20	0.808

* where 1 = very unlikely and 5 = very likely; **Significant difference between the two groups

It can therefore be concluded that males and females do not differ significantly in terms of their overall likely complaint behaviour when they are not completely satisfied when visiting a restaurant. However, females are significantly more likely to ignore an incident and do nothing, while males are significantly more likely to complain to a manager (H_1).

H_2 : Restaurant patrons with different marital statuses differ significantly in terms of their likely complaint behaviour when they are not completely satisfied when visiting a restaurant.

The results of one-way ANOVAs indicate that significant differences exist between at least two of the three marital status groups (single, married or living with someone, and divorced, separated and widowed) for two of the seven statements measuring likely complaint behaviour when they are not completely satisfied when visiting a restaurant.

The Scheffe test indicates that respondents who are married or living with someone (mean score = 2.31) are significantly more likely to complain to a manager than respondents who are single (mean score = 2.05; p-value = 0.036). The Scheffe test furthermore indicates that respondents who are married or living with someone (mean score = 1.82) are significantly more likely to complain to an owner or franchisor than respondents who are single (mean score = 1.59; p-value = 0.041). The results are portrayed in Table 4.

Table 4: Significance testing for the mean scores for likely complaint behaviour for the different marital statuses for each statement

Statement	Single (mean score*)	Married or living with someone (mean score*)	Divorced, separated or widowed (mean score*)	ANOVA (p-value)
I will not use the restaurant again	2.37	2.47	2.12	0.175
I will tell my friends/family not to use the restaurant	2.42	2.47	2.32	0.648
I will ignore the incident and do nothing	1.51	1.56	1.40	0.620
I will complain to the waiter	2.33	2.48	2.60	0.147
I will complain to the manager	2.05	2.31	2.20	0.036**
I will complain to the owner/franchisor	1.59	1.82	1.68	0.041**
I will write a letter to a newspaper about my ordeal	1.14	1.25	1.12	0.097

* where 1 = very unlikely and 5 = very likely; **Significant difference between the two groups

It can therefore be concluded that different marital statuses (single, married or living with someone and those who are divorced, separated or widowed) do not differ significantly in terms of their overall likely complaint behaviour when they are not completely satisfied when visiting a restaurant. However, respondents who are married or living with someone are significantly more likely to complain to a manager or to an owner or franchisor than those who are single (H₂).

H₃: Restaurant patrons of different ages differ significantly in terms of their likely complaint behaviour when they are not completely satisfied when visiting a restaurant.

The results of one-way ANOVAs indicate that significant differences exist between at least two of the three age groups for three of the seven statements measuring likely complaint behaviour when they are not completely satisfied when visiting a restaurant.

The Scheffe test indicates that respondents who are 30 years old and older (mean score = 2.38 and 2.35 respectively) are significantly more likely to complain to a manager than those who are younger than 30 (mean score = 1.97; p-value = 0.000). The Dunnett T3 test indicates that respondents who are 30 years old and older (mean score = 1.85 and 1.82 respectively) are also significantly more likely to complain to an owner or franchisor than those who are younger than 30 (mean score = 1.54; p-value = 0.003). The Dunnett T3 test furthermore indicates that respondents who are younger than 30 (mean score = 1.13) are also significantly less likely to write a letter to a newspaper about an ordeal at a restaurant than those who are between 30 to 49 years old (mean score = 1.28; p-value = 0.024). The results are portrayed in Table 5.

Table 5: Significance testing for the mean scores for likely complaint behaviour for different age groups for each statement

Statement	Younger than 30 (mean score*)	30 to 49 years (mean score*)	50 years and older (mean score*)	ANOVA (p-value)
I will not use the restaurant again	2.32	2.42	2.46	0.464
I will tell my friends/family not to use the restaurant	2.42	2.42	2.53	0.610
I will ignore the incident and do nothing	1.50	1.56	1.51	0.838
I will complain to the waiter	2.32	2.48	2.55	0.91
I will complain to the manager	1.97	2.38	2.35	0.000**
I will complain to the owner/franchisor	1.54	1.85	1.82	0.003**
I will write a letter to a newspaper about my ordeal	1.13	1.28	1.15	0.024**

* where 1 = very unlikely and 5 = very likely; **Significant difference between the two groups

It can therefore be concluded that different age groups (younger than 30 years old, 30 to 49 years and 50 years and older) do not differ significantly in terms of their overall likely complaint behaviour when they are not completely satisfied when visiting a restaurant. However, respondents who are 30 years old and older are significantly more likely to complain to a manager or to an owner or franchisor than respondents who are younger than 30. Respondents who are 30 to 49 years old are significantly more likely to write a letter to a newspaper regarding their ordeal than those who are younger than 30 years of age (H₃).

H₄: Restaurant patrons who spend different amounts on average at a restaurant differ significantly in terms of their likely complaint behaviour when they are not completely satisfied when visiting a restaurant.

The results of Independent samples t-tests indicate that significant differences exist between the two groups based on different amounts spent for three of the seven statements measuring likely complaint behaviour when they are not completely satisfied when visiting a restaurant. Respondents who usually spend R100 or more (mean scores = 2.50, 2.30 and 1.78 respectively) at a restaurant are significantly more likely to complain to a waiter, manager or to the owner/franchisor than those respondents who spend less than R100 (mean scores = 2.20, 1.86 and 1.60 respectively; p-values = 0.009, 0.000 and 0.003 respectively). Table 6 provides an exposition of the results.

Table 6: Significance testing for the mean scores for likely complaint behaviour based on different amounts spent at a restaurant for each statement

Statement	Less than R100 (mean score*)	R100 and more (mean score*)	Independent sample t-test (p-value)
I will not use the restaurant again	2.42	2.38	0.714
I will tell my friends/family not to use the restaurant	2.49	2.43	0.548
I will ignore the incident and do nothing	1.60	1.50	0.322
I will complain to the waiter	2.20	2.50	0.009**
I will complain to the manager	1.86	2.30	0.000**
I will complain to the owner/franchisor	1.50	1.78	0.003**
I will write a letter to a newspaper about my	1.11	1.22	0.056

ordeal			
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* where 1 = very unlikely and 5 = very likely; **Significant difference between the two groups

It can therefore be concluded that respondents who spend different amounts at a restaurant do not differ significantly in terms of their overall likely complaint behaviour when they are not completely satisfied when visiting a restaurant. However, those who spend R100 and more at a restaurant are significantly more likely complain to a waiter, manager or owner or franchisor than those that spend less than R100 (H₄).

H₅: Restaurant patrons who visit restaurants at different times of the day and week differ significantly in terms of their likely complaint behaviour when they are not completely satisfied when visiting a restaurant.

The results of Independent samples t-tests indicate that significant differences exist between the two groups based on different times they visit the restaurant for two of the seven statements measuring likely complaint behaviour when they are not completely satisfied when visiting a restaurant. Respondents who usually dine during office hours (mean score = 2.70) are significantly more likely to tell friends and family not to use the restaurant than those dining in the evenings and over weekends (mean score = 2.41; p-value = 0.018). However, those dining during office hours (mean score = 1.90) are also significantly more likely to ignore the incident and do nothing than those dining in the evenings and over weekends (mean score = 1.48; p-value = 0.009). Table 7 provides an exposition of the results.

Table 7: Significance testing for the mean scores for likely complaint behaviour based on different times the respondents visit the restaurant for each statement

Statement	Office hours (mean score*)	Evenings and weekends (mean score*)	Independent sample t-test (p-value)
I will not use the restaurant again	2.40	2.39	0.948
I will tell my friends/family not to use the restaurant	2.70	2.41	0.018**
I will ignore the incident and do nothing	1.90	1.48	0.009**

I will complain to the waiter	2.45	2.42	0.843
I will complain to the manager	2.13	2.21	0.590
I will complain to the owner/franchisor	1.60	1.73	0.368
I will write a letter to a newspaper about my ordeal	1.15	1.20	0.568

* where 1 = very unlikely and 5 = very likely; **Significant difference between the two groups

It can therefore be concluded that respondents who usually go to restaurants at different times (office hours versus evening and weekends) do not differ significantly in terms of their overall likely complaint behaviour when they are not completely satisfied when visiting a restaurant. However, those respondents dining during office hours are significantly more likely to tell friends not to use the restaurant than those who dine during the evenings or weekends. This group is, however, significantly more likely to ignore the incident and do nothing than evening and weekend diners (H₅).

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

From the literature review it could be concluded that businesses, and restaurants in particular, should encourage customers to complain, as it is only when customer complaints are properly understood that effective complaint handling and service recovery can be implemented, thereby possibly improving customer perceptions of service quality, reducing negative word-of-mouth communications, increasing customer satisfaction and retention, and ultimately improving profitability (Ngai *et al.*, 2007: 1389; Yuksel *et al.*, 2006: 11; Thøgersen *et al.*, 2003). The purpose of this study was to examine restaurant patrons' complaint behaviour by specifically considering demographic characteristics, as it is believed that people with different demographic characteristics tend to engage in different kinds of complaint behaviour (Ngai *et al.*, 2007: 1387).

Results from this study showed that respondents were most likely to tell friends/family not to use the restaurant, complain to the waiter or not to use the restaurant again when they are not completely satisfied when visiting a restaurant. Respondents were least likely to write a letter to a newspaper about the ordeal. By considering the complain action categories that customers take into consideration (Wilson *et al.*, 2008: 373; Lovelock & Wirtz, 2007: 391), it can be concluded that respondents were most likely to take some form of private action (to tell friends/family not to use the restaurant or not to use the restaurant again) or public action in the form of complaining to a waiter. This finding corresponds to that of Jones *et al.* (2002: 107), who

found that the most common complaint behaviour response by restaurant patrons was complaining to the service provider or engaging in private responses.

This finding has serious implications for restaurateurs in that respondents in this study were more inclined to tell friends/family not to use the restaurant (thereby spreading negative word-of-mouth communication) or not to use the restaurant again. The only other complaint action they may engage in, and the only option providing the restaurant the opportunity to rectify the failure by means of service recovery, is to complain to a waiter. From this it can be concluded that the restaurant will probably not be able to change customer dissatisfaction to satisfaction, and will therefore not retain their customers. Restaurants should therefore actively encourage patrons to voice their complaints to either the waiter or manager. Managers should also move between customers to give them the opportunity to voice concerns. By not encouraging customers to complain, service recovery will not be possible in the event of a service failure and customers will, therefore, probably not be retained.

Although it was concluded that different demographic groups (gender, marital status, age, average spending when visiting a restaurant, and when a restaurant is usually visited) do not differ in their overall complaint behaviour, differences were noted in terms of individual complaint actions. It was found that females are more likely to ignore an incident and do nothing, while males are more likely to complain to a manager. It was furthermore found that respondents who are married or living with someone are more likely to complain to a manager or to an owner or franchisor than those who are single. Also, older respondents (older than 30) are more likely to complain to a manager or to an owner or franchisor than respondents who are younger than 30. Respondents who are 30 to 49 years old are also more likely to write a letter to a newspaper regarding their ordeal than those who are younger than 30 (this finding supports that of Ngai *et al.*, 2007: 1387, who found that older individuals are more likely to engage in public action). Concerning average amount spent when visiting a restaurant, it was concluded that those who spend R100 and more at a restaurant are more likely to complain to a waiter, manager or owner or franchisor than those that spend less than R100. Finally, it was found that although respondents going to a restaurant during office hours are more likely to tell friends/family not to use the restaurant than those who dine during the evenings or weekends, this group is more likely to ignore the incident and do nothing than evening and weekend diners.

These findings hold implications for restaurateurs. Firstly, although different demographic groups do not differ in their overall complaint behaviour, it does not imply that no differences exist between groups, as groups may differ in their complaint action (i.e. private action, public action or no action) as highlighted above. Secondly, differences were noted between different groups in terms of their demographic characteristics based on individual complaint actions (i.e. complain to the waiter or tell friends/family not to use the restaurant). This implies that restaurateurs must identify different groups (based on demographic characteristics) that will complain differently. By doing so, restaurateurs will be able to develop strategies that best deal with each group's complaint action in an effort to get all patrons who experience a service failure to complain to the restaurant staff, thereby allowing the restaurant to offer swift recovery in an effort to restore satisfaction and, ultimately, to retain customers. By not encouraging customers to complain to staff, restaurants may lose customers by assuming all is well when, in fact, customers are "voicing" their complaints by going somewhere else.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

A few limitations can be reported. Firstly, convenience sampling was used. Findings are therefore only representative for those who completed the questionnaire and not the study population. Secondly, the study was conducted in only two provinces, namely Gauteng and the North West. Future studies could possibly include other geographic areas to determine whether restaurant patrons from different provinces would exhibit the same or different complain behaviours. Thirdly, more males than females participated in the study, thereby possibly skewing the results obtained in this study. Finally, only complaint behaviour pertaining to restaurants was considered. Future studies could include more, and diverse, industries to determine similarities and differences with regard to customer complaint behaviour. Future studies could also investigate cultural differences pertaining to complaint behaviour.

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WHY CHOOSE SOUTH AFRICA: INSIGHTS FROM INTERNATIONAL UNDERGRADUATE STUDENTS

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Abstract

South African government in conjunction with its institutions of higher learning has taken many deliberate measures aimed at attracting international students. This study was aimed at investigating factors that influence international students' choice of the country as their study destination. Data used in the analysis was collected using an online structure questionnaire from 88 international undergraduate students studying at the University of Witwatersrand. The results show that the most important influencing factors relate to quality of education offered, lower costs associated with studying in the country and geographical proximity of the country to home countries of most of the students hosted. Available promotion information on study opportunities in South Africa was found to have had influenced the least number of students in their decision to study in the country. The findings have wide implications on the marketing of the country as an international study destination and these have been highlighted in the paper.

Key Words: International undergraduate students, Country choice; Higher education; South Africa.

HAS TECHNOLOGICAL INNOVATIONS RESULTED IN INCREASED EFFICIENCY AND COST SAVINGS FOR BANKS' CUSTOMERS?

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Key words: Technological innovations, banking sector, efficiency, Costs reduction

Abstract

The role of technological innovations on efficiency and cost reductions in the banking sector is paramount to the successful and profitable service delivery in the sector. Technological innovations play a significant role in improving the efficiency of the banking sector as well as reducing the costs of banking transactions for customers. The banking sector has for the past decade witnessed various improvements and new technologies with the main purpose of improving the service delivery of the banking sector. The research at hand obtained a data set to examine the contentions that technological innovations are benefiting customers in Alice in the Eastern Cape Province, in terms of improved efficiency and reducing costs for

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the banking sector customers. The findings of this study support this contention and had proved that technological advances played a significant role in improving the welfare of customers.

INTRODUCTION AND BACKGROUND TO THE STUDY

Technological innovations (advances in technology such as the invention of Automated Tellers Machines (ATMS), Cell phones and computers) have had a profound impact on the banking sector and the wider financial sector over the last decade in South Africa. Bankley, Scerri, and Saloojee (2006:283) defined technology as the way of doing things better. As such, technologically excellent organisations continuously strive to identify better processes and systems management techniques to ensure that they are market leaders. Of particular note is the rapid advancement in the Information and Communication Technology (ICT) which has become instrumental in the development of banks' business strategies, customer services, and organizational structures, among other related functions (Bankley et al., 2006:283).

In the financial services industry at large, the banking sector was one of the first to embrace rapid globalisation and benefit significantly from Information Technology (IT) developments. Technological developments in the banking sector started in the 1950s with the installation of the first automated bookkeeping machine at banks. Automation in the banking sector became widespread over the next few decades as bankers quickly realized that much of the labour intensive information handling processes could be automated with the use of computers. The first ATM is reported to have been introduced in the USA in 1968 and it was only a cash dispenser (Jayamaha, 2008:1).

The advent of ATMs played a significant role in improving customer convenience and reducing costs and this led to improved efficiency and profitability in services delivery of the banks. Prior to the advent of ATMs, funds withdrawals, accounts enquiries and funds transfers between accounts required face to face interactions between bank staff and customers, a process which was slow and subject to costly human errors and large costs of labour. IT developments have enabled banks to gradually replace manual work with automated processes.

Technological progress has brought in the speedy processing and transmission of information, efficient/cost effective marketing of banking products, enhancement of customer access and awareness, wider banking networking and regional and global links on an unprecedented scale (Jayamaha, 2008:1). IT developments thus played a role in changing the product range, product development, service channels and type of banking services as

well as the packaging of such services with significant efficiencies not only in the banks, but also the ancillary services to banks.

Of notable importance in the banking sector is the growth of internet banking, a development that came as a result of technological innovations. Internet banking provides an extensive, low cost and convenient financial network that facilitates banking services to customers anywhere and anytime. The internet resulted in improved telecommunication networks which enabled banking transactions to be done on-line. Also a result of the internet is the integration of e-trading with internet banking and banks' websites, a development necessary for marketing of the banking products. The internet has made it possible to establish low cost financial networking. (Porteous and Hazelhurst, 2004:32).

Despite the noted roles played by technology advancements in the banking sector, it remains a question of controversy as to whether the efficiency of the banking services providers in South Africa has improved and if so, to what extent and whether customers are happy with such developments. The controversy exists as a result of the fact that technological developments come with costs attached to them; and environmental and social effects to the society at large. Information technology is simply a necessary evil, something that every company has to have in order to keep basic activities run efficiently. However, technology has taken every activity in daily operations in most firms to such an extent that any breakdown in technology will have unimaginable consequences, for example a breakdown of an ATM for say an hour may result in huge costs to the firm in terms of lost transactions (Austin, 2007:2).

The impact of technological innovations on production and profitability also attracted several researches. In their research, Bankley et al. (2006:104) asked firms to subjectively answer a question on whether innovative activities had either a positive or negative impact on a range of production activities and overall profitability. The results showed that 38% of firms indicated that the innovative activities had a positive impact on profitability at the firm level and only 7% reported a negative impact.

Since the ultimate objective of every profit making venture is to increase the profitability and wealth creation, it becomes an area of interest to find out whether the use of technological advances in banks are contributing towards increasing profitability. A contentious question is also whether these technological innovations results in cost savings for customers.

To this effect, the research at hand investigated the role played by technological developments on the efficiency and cost aspects relating to banks customers in Alice, with special reference to Standard Bank and FNB. Alice is a small, developing town located

about 100km northwest of East London on the Tyume River. Although the surrounding plateau is used for cattle grazing and production of citrus fruit, Alice is known principally as an educational and medical centre with a several small and medium retail enterprises, which makes it a highly populated area with people from diverse backgrounds. Standard Bank and FNB are the two major banks which have branches in Alice.

The section that follows states the problem that the research at hand seeks to provide answers to.

STATEMENT OF THE PROBLEM

Technological advances come with several costs and effects to the society and bankers, while efficiency is aimed at maximising output and eventually profitability, with a given set of resources. The aim of the study is to investigate banking customers' perceptions on whether technological innovations have improved efficiency and reduced costs relating to customers of the banking sector.

To address this problem the following section outlines the researcher's objectives.

RESEARCH OBJECTIVES

The research seeks to explore the following objective:

- To determine the impact of technological innovations on the banking sector's efficiency as well as costs relating to its customers.

RESEARCH HYPOTHESIS

In pursuit of the above mentioned objective the following hypotheses have been formulated:

Primary hypothesis

- H_{1_0} -Technological innovations have not improved efficiency in the banking sector with relation to customers in Alice, South Africa.
 H_{1_1} -Technological innovations have improved efficiency in the banking sector with relation to customers in Alice, South Africa.
- H_{2_0} -Technological innovations have not reduced the cost of banking for customers in Alice, in South Africa.
 H_{2_1} -Technological innovations have reduced the cost of banking for customers in Alice in South Africa.

Having formulated the hypotheses for the study, it is necessary to outline the significance of the research and this is addressed in following section.

LITERATURE REVIEW

The concept of efficiency, profitability and technological innovations attracted a wide range of research and the attention of various scholars in the past. A number of concepts can be used to explain efficiency in different contexts. Qayyum and Khan (2007:5) suggested efficiency as being the ratio output per unit input in which case they suggested that efficiency is decomposed into two components namely, allocative (economic) efficiency and technical efficiency. A firm is said to be technically more efficient than another firm if it can produce more output using a given amount of inputs as compared to another firm (Qayyum and Khan, 2007:5).

Fourie, Falkena and Kok (1994) suggested efficiency related principles in the financial sector. They suggested two such principles namely; the maintaining of the maximum level of competition among market participants and the securing of competitive neutrality between such participants.

The reason for the maintenance of maximum level of competition among market participants is that competition is likely to enhance the achievement of high levels of market efficiency especially if it should cause the rationalisation of the provision of financial services and the removal of restrictive practices that would impair trading in financial assets (Fourie et al., 1994:246).

Fourie et al. (1994:247) asserts that achieving neutrality between market participants would promote the attainment of a high level of efficiency. Competitive neutrality could be defined as a situation in which no party to the financial transaction would enjoy a competitive advantage due to regulation.

Porteous and Hazelhurst (2004:30) suggested that even when technological advances such as the widespread use of ATMs, reduced the cost of transacting the profits were still not as good as those derived from other areas of activities. They also asserted that the most notable among experimental groups is the Standard Bank's community banking division formed in 1989 to explore ways of lending and transacting.

In South Africa the first wave of change in transaction banking began when Standard Bank made a focused and sustained move into the mass market through the launch of a separate E-Bank (electronic banking using the internet) in 1994. This offered an electronic transaction and savings product through, E-Plan, through special service sites. E-Bank grew fast in

numbers of clients. This was due to the migration of existing customers from other products as well as to new sign up through dedicated E-Centres (Porteous and Hazelhurst, 2004:30).

Contributory to the banking sector technological advances is the increasing use of cell phones. World Bank analysts have suggested that mobile commerce, (the use cell phone in doing trading transactions) and electronic finance are close to take off in developing countries as connectivity levels and reliability increases. They predicted that this trend will allow developing countries to leapfrog in the development of their financial systems. For South Africa, 2006 was projected as the take-off year for online banking (Porteous and Hazelhurst, 2004:42).

Heffernan (2001:25) asserted that the retail banking sector has witnessed rapid process technology, where new technology has altered the way key tasks are performed. In his study in the UK, Heffernan (2001:25) found that the number of ATMs in services has risen from 568 in 1975 to 15 208 in 1995, a trend he said was also observed in all industrialized countries.

In another study, Berger (2003:143) identified the changes in the use of selected banking technologies, indicating a significant growth in the use of new information technologies (IT) and financial technology. To this extent, the role of technology in the banking sector need to be addressed critically, as the information and communication technologies (ICT) are changing the banking sector operations and efficiency.

The following section addresses the research design and methodology to be followed by the researcher in collecting primary data for this research.

RESEARCH METHODOLOGY AND DESIGN

Sample population

One hundred respondents residing in Alice in the Eastern Cape, South Africa, were randomly selected for the survey. The targeted population for this survey were individuals using the banking services in Alice. A stratified random sampling method was used on which the sample was divided equally between respondents using the banking services of Standard Bank and FNB. Therefore, a sample comprising of 50 respondents banking with Standard and the other 50 respondents banking with FNB was used to collect data. The use

of a stratified random sampling, which is a probability sampling method minimised selection bias since all the respondents had an equal chance of being selected.

Study Design

A quantitative approach was used to gather adequate and reliable field information. In terms of the quantitative approach, the rationale was to profile the population, identify technological innovations in the banking sector and their influence on efficiency and cost reduction for customers. The questionnaire designed for the survey was piloted using 30 respondents. Minor difficulties identified during the pilot resulted in the realignment of the questionnaire for the main survey. The questionnaire designed was then used to capture respondents' responses.

DATA ANALYSIS PROCEDURE

The collected data was analysed using a descriptive analysis as well as the use of correlation and regression analysis and cause and effect analysis. Descriptive analysis provides a very useful initial examination of the data, even if the ultimate concern of the researcher is inferential in nature. The purpose of descriptive analysis, according to Tustin, Martins, Ligthelm and Wyk (2005:523) is to:

- provide preliminary insights into the nature of the responses obtained, as reflected in the distribution of values for each variable of interest;
- helps to detect errors in the coding and data capturing process;
- provide means of presenting the data in a transparent manner with tables and graphs;
- provide summary measures of typical or average responses as well as extent variation in responses for a given variable; and
- provide an early opportunity for evaluating whether the distributional assumptions of subsequent statistical tests are likely to be satisfactory (Tustin et al., 2005:523).

A statistical analysis package called SAS (Statistical Analysis System) was used to assess the associations among the chosen variables. This shall be achieved by use of the chi-square tests of association, based on the p-value approach. The collected data shall also be tabulated and presented graphically to depict the relative effect of technological innovations on the banking efficiency and the costs to customers. The research data was analysed using a descriptive analysis. Descriptive statistics are used to point out the measures of central tendency (mean, median, mode), measures of dispersion (variance, standard deviation,

range, interquartile range) as well as shape (skewness and kurtosis). In this study two important measures were considered, the mean and standard deviations.

THE EMPIRICAL RESULTS

The presentation of results in the paper is based on the data analysis process which involved a through analysis of each and every question presented in the data collection instrument used (the questionnaire).

Questions 1 to 3 on the questionnaire requested the personal information of the respondents from which data was collected. The purpose for these questions was to determine the proportional compositions of the respondents in terms of gender, age and whether the respondents were a member of banking staff or not. The gender composition of the sample was fifty five per cent (55%) male and 45% female.

On the age composition, fifty one per cent (51%) of the respondents were between the ages of 15 to 25 years, twenty seven per cent (27%) were between 26 and 35 years, seventeen per cent (17%) were between 36 and 45 years, 4% were between 46 and 55 years and only one per cent (1%) was above the age of 55 years. All the respondents were not members of staff for any bank.

Questions 4 to 12 in section B of the research questionnaire relates to the hypotheses of this study.

Question 4 was a classification question which seeks to identify respondents according to the banks they use. Question 5 sought to identify technological advances that are popular amongst banks customers. Question 4 and 5 are restated below respectively:

- Which of the following banks do you use for your banking transactions?
- What technological advances did you witness from the bank of your choice?

The reason for asking these two questions was to determine customer awareness of technological advances as identified in the banks of their choices. In order to perceive the relevance of technological advances in improving their welfare, customers must be aware of the presence of these technological advances. As per the research methodology plan, 50% of the respondents were using Standard Bank and the other 50% were from FNB.

Ninety four per cent (94%) of the respondents from Standard Bank identified ATMs (Automated teller machines), computers, the internet, cell phone banking, credit cards and online banking as the technological advances they have witnessed in their bank. Ninety eight

per cent (98%) of the respondents from FNB identified the same technological advances as above. This indicates that the two use the same technological advances in their service delivery. The following subsection is an analysis of question 6 which sought to identify how customers view the contributions of each of the identified technological advances.

Technological advances as identified by customers

Question 6 seeks to identify the view of consumers with regard to technological advances they perceive as having made the greatest contribution in improving efficiency. Question 6 read as follows:

- Which of the technological advances in the banking sector do you think has made the greatest contribution in the efficiency of banks in South Africa?

The researcher sought to identify the per centages of respondents who voted for each technological innovation as having made the greatest contributions to increasing efficiency in the banking sector. Figure 1 below presents customers' views on each technological advance.

Figure 1 Contribution of technological Advances on Efficiency in the Banking Sector

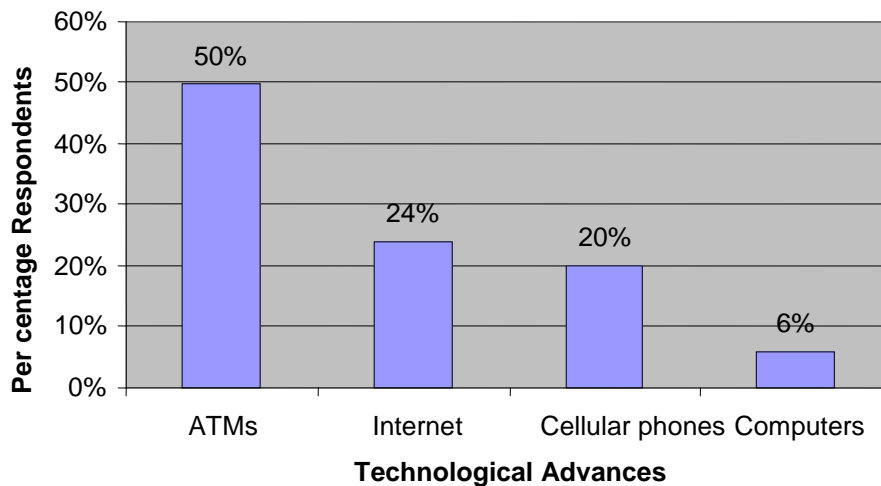


Figure 1 shows that fifty per cent (50%) of the respondents irrespective of whether they are from FNB or Standard Bank were of the view that ATMs have made the greatest contribution towards increasing the efficiency of the banking sector in South Africa.

The reasons cited for by respondents of why they think ATMs have made the greatest contributions include their easy accessibility, affordability and less subjectivity to third person human errors. Twenty four per cent (24%), twenty per cent (20%) and six per cent (6%) is applicable for the internet, cellular phones and computers respectively.

Rankings of banks based on their level of use of technological advances

Question 7 required respondents to rank the two banks according to their level of use of technological advances. Question 7 is restated below:

- Rank the following banks in terms of their level of use of advanced technological innovations.

Figure 2 below illustrates rankings of banks by the respondents from both banks:

Figure 2 Rankings of Banks on their use of Technological Innovations

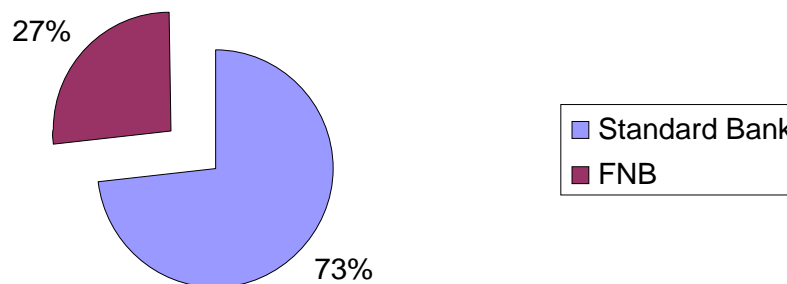


Fig 5.2 shows the majority of respondents ranked Standard Bank higher than FNB in terms of the use of advanced technologies. Seventy three (73%) indicated that Standard Bank have a higher level of use of technological innovations compared to FNB with twenty seven per cent (27%). Some customers hold accounts in both FNB and Standard Bank, thus a comparison of the services of each bank by a single customer was possible with the majority voting for Standard Bank as the best.

Respondents cited that Standard Bank's branch in Alice town makes the best use of its wide range of technological advances and serves customers quickly compared to FNB. The presence of two ATMs for Standard Bank in Alice, compared to one for FNB, also prompted

most respondents to rank Standard Bank as being higher than FNB in terms of the use of technological advances.

Of paramount concern is whether technological innovations have resulted in improved efficiency of the banking sector in South Africa.

Improvement in the efficiency of the banking sector

Question 8 sought to determine whether respondents agreed, disagreed or were not sure of whether the efficiency of the banking sector has improved in the past ten years, in South Africa. Question 8 is restated below:

- The efficiency of the banking sector's service delivery has improved greatly in the past decade.

The reason for asking this question was to find whether technological innovations has resulted in improved efficiency of the banking in South Africa. Technological revolutions approximately date back to ten years. Figure 3 shows the views of respondents with respect to the improvement of efficiency in the banking sector.

Figure 3 Respondents views of improvement in efficiency in the past ten years

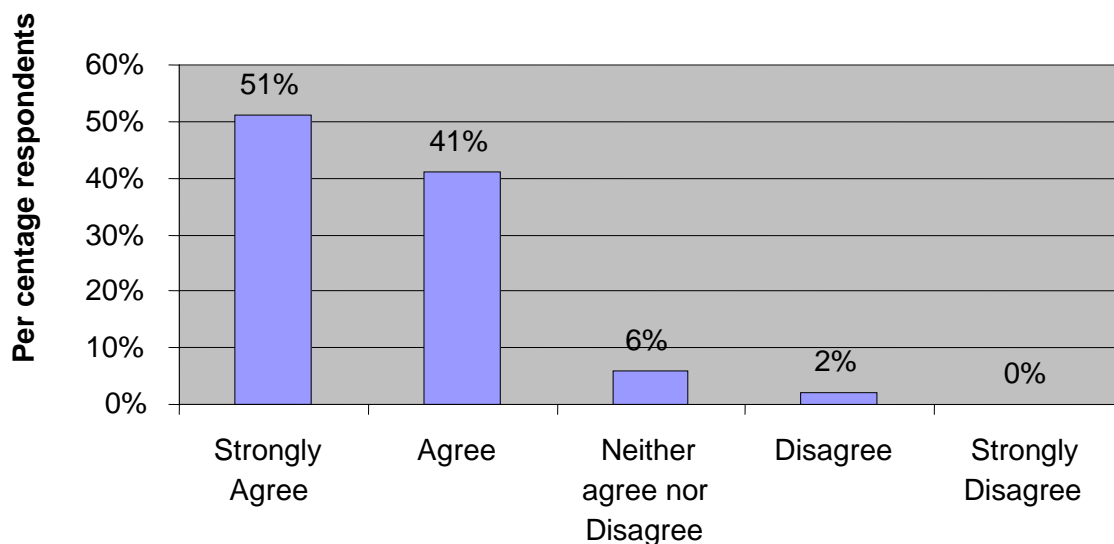


Figure 3 shows the respondents' view on the improvement of efficiency of the banking sector in the past ten years. Ninety two per cent (92%) of the respondents (consisting those who indicated strongly agree, fifty one per cent (51%) and agree, forty one per cent (41%)) agreed that the efficiency of the banking sector has improved in the past ten years. Only two

per cent (2%) disagreed that the efficiency of the banking sector has improved while six per cent (6%) neither agree nor disagree.

The perceived improvement was attributed to continued improvements in technologies used in banks. The perceptions of respondents on ATMs, online banking and cell phone banking on their contributions to efficiency and cost reductions were sought.

Evaluation of ATMs

ATMs were viewed by the respondents as having made the greatest contribution to the improved efficiency of the banking sector. Question 9 provided for an evaluation of ATMs on cost effectiveness, user friendliness, efficiency, reliability and convenience. Question 9 is restated below:

- From your personal experience with the use of ATMs, please rate the performance of ATMs on the following scale. (*Each attribute has its own scale ranging from 1 to 7 where e.g. 1 denotes the most cost effective and 7 the least cost effective on each attribute in question; please circle the number that best describe the performance of ATMs on that attribute*).

These attributes contribute either directly or indirectly to the efficiency and cost reduction in completing bank transactions.

ATMs on cost effectiveness

Figure 4 shows the evaluations of respondents on ATMs' cost effectiveness.

Fig 5.4 Evaluation of ATMs on Cost Effectiveness

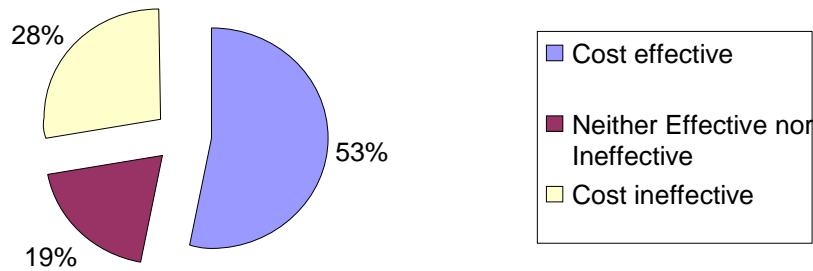
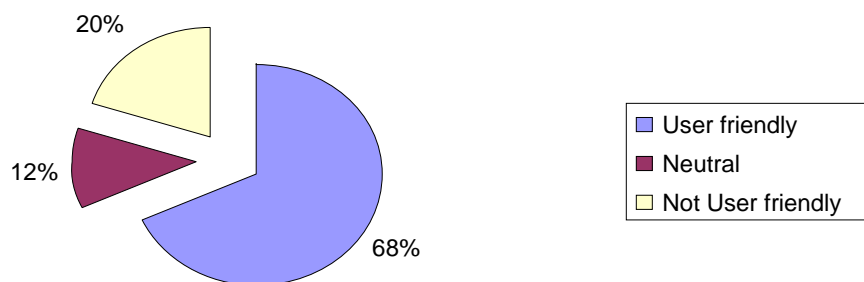


Figure 4 shows that fifty three per cent (53%) of the respondents indicated that ATMs are cost effective. Twenty eight per cent (28%) indicated that ATMs are cost ineffective while nineteen per cent (19%) indicated neither cost effective nor cost ineffective. This indicated that a large proportion of respondents, are of the view that ATMs are cost effective, thus ATMs ranks high in this attribute.

ATMs on user friendliness

ATMs also scored high on user friendliness with sixty eight per cent (68%) indicating that they are user friendly. User friendliness shows that ATMs are easy to operate and have little or negative effects to users. Twenty per cent (20%) of the respondents indicated that ATMs are not user friendly citing that they are difficult to operate, while twelve per cent (12%) were neutral about the issue. Figure 5 shows the respondents evaluations of ATMs on user friendliness.

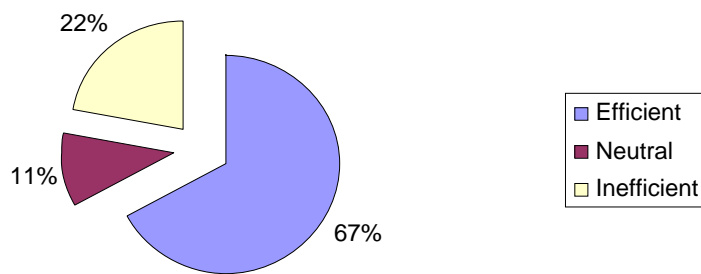
Figure 5 Evaluation of ATMs on User Friendliness



ATMs on efficiency

Sixty seven per cent (67%) of the respondents indicated that ATMs are efficient; twenty two per cent (22%) indicated that ATMs are inefficient while eleven per cent (11%) were neutral about the issue. The statistics indicated that ATMs also scored high on efficiency. Figure 6 shows respondents' evaluation of ATMs on their efficiency.

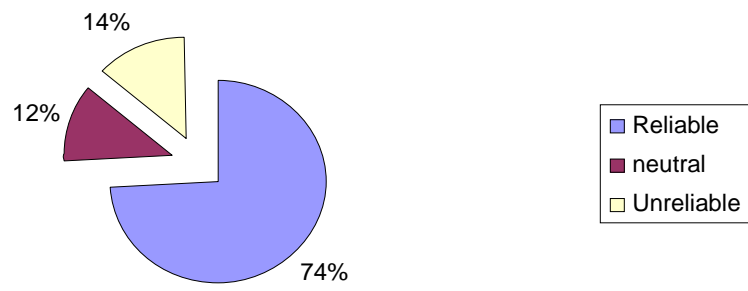
Figure 6 Evaluation of ATMs on efficiency



ATMs on reliability

Seventy four per cent (74%) of the respondents indicated that ATMs are reliable; fourteen per cent (14%) indicated that ATMs are unreliable and twelve per cent (12%) were neutral. Respondents, who indicated that ATMs are reliable, argued that they are free to go to an ATM any time they wish and experience little inconvenience thus indicating that ATMs are reliable.

Figure 7 Evaluation of ATMs on reliability



ATMs on convenience

Figure 8 shows the respondents' evaluation of ATMs on convenience.

Figure 8 Evaluation of ATMs on convenience

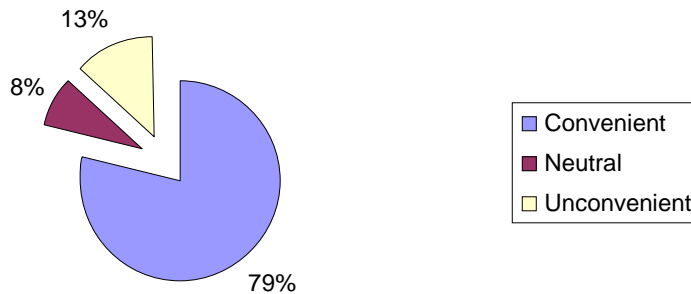


Figure 8 shows that seventy nine per cent (79%) of the respondents indicated that ATMs are convenient; thirteen per cent (13%) indicated ATMs are inconvenient while eight per cent (8%) indicated that they are neutral about the issue. The widespread availability of ATMs in many public places makes ATMs easily accessed by customers.

On the overall evaluation, ATMs were considered by the majority of the respondents to be cost effective, user friendly, efficient, reliable and convenient. This explains ATMs greatest contribution to increasing efficiency and reducing banking costs for customers as per the views of customers.

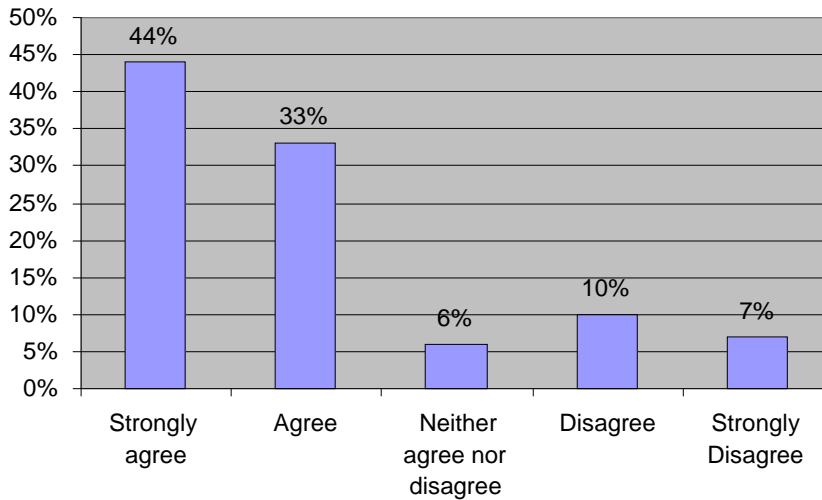
Online banking

Also an identified technological innovation is the growth in online banking. This was addressed by question 10. Question 10 is restated below:

- Online banking (the use of the internet to conclude bank transactions) is the solution to the problem of queuing in banks.

Respondents were asked whether they strongly agree, agree, agree nor disagree, disagree or strongly disagree with the above statement. The reason for asking this question was to identify whether online banking has increased efficiency and reduced costs for customer through the reduced need for queuing in the bank for some transaction which should have been done otherwise. Queuing result in customers foregoing some other activities that they should have done, hence the opportunity cost. Fig 5.9 below shows the respondents' views on online banking with regard to online banking.

Figure 9 Online banking and Queuing in banks



From Figure 9, forty four per cent (44%) of the respondents strongly agree that online banking reduced queuing in banks, thirty three per cent (33%) agree (this means 77% of the respondents were on the agreeing side), six per cent (6%) neither agree nor disagree while seventeen (17%) disagree (7% strongly disagree and 10% disagree). The respondents who disagreed argued that access to the internet is limited to most people in South Africa thus most people still have to go and do their transactions in the bank.

Cellular phone banking

Respondents were asked on whether cell phone banking is helping customers in reducing costs of making banking transactions. This was addressed in questions 11 which are restated below:

- Do you think cell phone banking (the use of cell phones in doing bank transactions) is helping customers in reducing costs?

The reason for asking this question was to find out if cell phone banking has resulted in the reduction of the banking costs for customers. Fig 5.10 below shows the respondents' views on whether cell phone banking has reduced costs of banking.

Figure 10 Cell phone banking on reducing costs

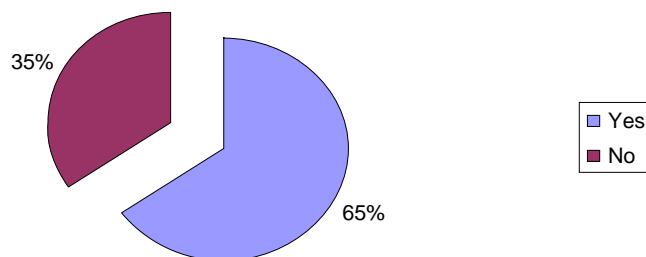


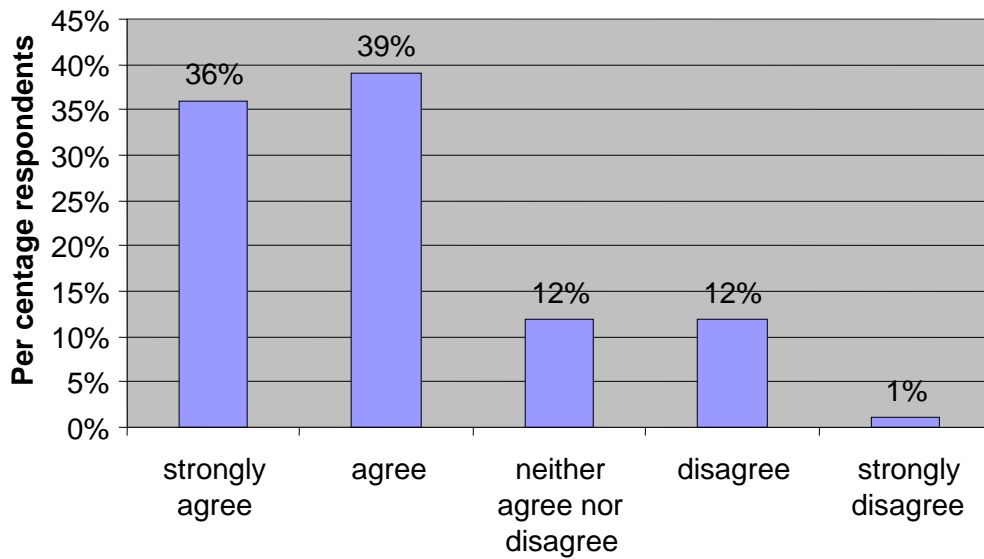
Fig 5.10 shows that sixty five per cent (65%) of the respondents agreed that cell phone banking is helping in reducing costs of banking. Among the reasons cited included cheapness of cell phone banking, no costs of travelling to the bank and the convenience of cell phone banking (customers can do their transaction anywhere, anytime). Thirty five per cent (35%) of the respondents were of the opinion that cell phone banking does not help in reducing banking costs for customers. The reason for their argument ranged from the need for airtime, the need for cell phones with access to internet which are expensive and the fact that some transaction are simply not feasible using cell phone banking.

Technological innovations and costs reduction Question 12 sought to find out whether technological innovations in general have resulted in less costs of banking. Question 12 is restated below:

- Technological innovations resulted in cost savings to you as a customer.

Respondents were required to indicate whether they strongly agree, agree, neither agree nor disagree, strongly disagree or disagree with the above mentioned statement. The reason for asking this question was to find the general perceptions of respondents on whether technological innovations resulted in reduced costs of banking. Fig 5.11 below shows the views of the respondents:

Figure 11 Technological innovations on costs saving



From Figure 11, thirty six per cent (36%) of the respondents showed that they strongly agree with the statement that technological innovations have resulted in cost savings for customers. Thirty nine per cent (39%) agree, twelve per cent (12%) disagree and one percent (1%) strongly disagrees while twelve per cent (12%) neither agree nor disagree.

Question 13 asked respondents to give their suggestion on what should be done by banks to increase efficiency and reduce costs for customers. Question 13 is restated below.

- What do you suggest should be done by banks in order to increase efficiency and reduce costs in their service delivery?

The reason for asking this question was to find out respondents' suggestions of what should be done to further the improvement of efficiency and reduction of the banking costs for customers.

The suggestions that were very common with many respondents included the need to increase the number of ATMs to increase the reach to a number of people, especially in rural areas, the need to employ qualified staff with knowledge and expertise on the use of new technologies, motivate staff and the need to educate customers on how to make the best use of technological advances.

Question 14 asked respondents of the problems they think were a result of new technologies. Question 14 is restated below:

- What problems do you think were introduced by technological innovations in the banking sector's service delivery?

The reason for asking this question was to find out areas that need attention to ensure that customers are fully satisfied. The problems identified by respondents include:

- Higher bank charges as banks will be trying to recoup the cost of investment in new technologies.
- Lack of human contact or personal touch.
- Some technological innovations are complex to operate for an ordinary illiterate customer.
- Increase in robberies and fraud cases using advanced technologies.
- Lack of enough skilled staff.
- High cases of identity theft specifically in online banking.
- Reduced employment due to automation.

The researcher used statistical inference in testing the research hypotheses of which elements of technological innovations and relative contributions to efficiency improvements and cost reductions for customers were focused on. A 5% level of significance was used, that is, the null hypothesis was rejected if the average p-value was smaller than 5% or 0.05 (See the table 1). Based on the average p-values, the researcher failed to accept both null hypotheses. This means that technological innovations have resulted in improvements in efficiency in the banking sector as well as reducing banking costs for customers.

Variable	Observed average Chi-square values	Average p-values	Average degree of freedom
Hypothesis (i) H₀: Technological innovations have not improved efficiency in the banking sector with relation to customers in the town of Alice, South Africa.			
Contributions of technological advances to improving efficiency	40.4800	0.0001	4
Bank rankings in terms of their level of use of technological advances	78.7400	0.0001	2
Efficient improvements over the past ten years	72.8800	0.0001	3
ATMs and efficiency improvements.	28.8000	0.0001	6
ATMs and user friendliness	29.9200	0.0001	6
ATMs and convenience	120.7800	0.0001	6
Online banking and reduction in queuing	60.5000	0.0001	4
Average Efficiency improvement value	61.933	0.0001	4.5
• Hypothesis (ii) H₀- Technological innovations have not reduced the cost of banking for customers in Alice, in South Africa			
Cellphone banking and the reduction of costs of banking	9.000	0.0027	1
Technological advances' contribution to costs reduction	30.0000	0.0001	3
Technological innovations and costs saving	55.3000	0.0001	4

ATMs and cost effectiveness	23.7600	0.0006	6
Average costs reduction value	29.515	0.00085	3.5

Table 1 Average Chi-Square And P-Values

CONCLUSIONS

Overall, the analysis leads to the conclusion that technological innovations have resulted in improved efficiency and banking costs reductions for customers in Alice. This is depicted by the statistical inferences discussed. This conclusion is based on the perceptions revealed by the respondents. The majority of the respondents interviewed showed positive responses with respect to the improvement of efficiency in the banking sector and cost reductions as a result of the use of advanced technological innovations.

The prominent technological advances in the banking sector contributing to the improved efficiency and cost reductions for customers are Automated tellers machines (ATMs), Credit cards, Computers, the internet and Cell phones. ATMs have made the greatest contributions in improving the efficiency and reducing banking costs for customers. This shows that there is need to improve on the use of other technological innovations to further improve the efficiency and cost reductions in banking for the benefit of customers.

Despite the fact that technological innovations have resulted in improved efficiency and reduced costs of banking for customers, customers are facing problems in using these technological advances. Some of the problems resulting from the use of technological innovations include increased levels of fraud and robberies, the technical complexities in operating the new technologies coupled with illiteracy and lack of personal or human contact.

RECOMMENDATIONS

The banking sector should be able to determine the technical background of the majority of its customers before endeavouring into the use of advanced technologies. This entails assessing the literacy level of its major customers, the specific needs of its target customers and the potential benefits accruing to customers through the use of current technologies. This can be achieved through carrying a customer research. To address problems facing customers with use of technological advances and to further improve the efficiency of the banking sector and reduce costs for customers, the banking sector should:

- Engage in customer education on the use of new and advanced technological innovations.
- Carry out compatibility tests before introducing new advances in technological to assess acceptance by customers.
- Improve on the security systems for improved safety in the use of new technologies.
- Develop technologies that are simple to operate for an ordinary customer.
- Employ a skilled and qualified staffs which is able to assist customers with use of advanced technologies.

This will assist the banking sector to further improve its service delivery for the benefit of increased efficiency and ultimately profitability. Improving the welfare of customers is paramount for the bank to gain a positive image, thus developing technologies that minimise banking costs for customers is paramount to the success of the banking sector.

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WORK AND FAMILY INVOLVEMENT

OF MANAGERS IN THE SOUTH AFRICAN AUTOMOTIVE INDUSTRY

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Key words: Work involvement; family involvement; managers; automotive industry

Abstract

The aim of this study was to investigate the levels of work and family involvement of managers in the South African automotive industry. Secondary objectives included the exploration of these factors in relation to work restructuring, as well as how these factors are affected by the global economic recession. Data was gathered using an electronic questionnaire that was sent to automotive industry managers throughout South Africa. Four factors were investigated, namely work involvement, family involvement, work restructuring,

and the global recession. Statistical analysis was conducted in order to determine the relationships between these factors. Results indicated that no significant gender differences occurred for work or family involvement. A practically significant, positive relationship existed between family involvement and work restructuring. Furthermore, the economic recession had not resulted in family involvement levels decreasing. Recommendations for organisations included making use of flexible working arrangements to accommodate family needs and implementing both mentoring and counseling services.

INTRODUCTION

Work involvement has been defined by Yogev and Brett (1985) as a psychological response to one's current job or work role, in terms of the degree to which one identifies psychologically with the job and how important the job is to the individual's self-concept and self-image. Furthermore, family involvement can be defined as the degree to which an individual psychologically identifies with his or her family roles, how important these family roles are to his or her self-concept and self-image, as well as the individual's commitment to his or her family roles (Yogev and Brett, 1985). Because the roles of work and family are the most significant aspects of any individual's life (Werbel and Walter, 2002), there exists a need for employees raising children to maintain some form of balance between being involved in their work and seeing to the needs of their families. Conflicts between these two areas are expected to occur, which may be resolved through making changes in an individual's work and family behaviour (Karambayya and Reilly, 1992). This is known as work-restructuring.

This study aims to examine the work and family involvement levels, as well as the work restructuring levels, of managers in the South African (SA) automotive industry. Reh (2009) defines a manager as the person responsible for planning and directing the work of a group of individuals, supervising their work and assuming corrective action when necessary. An industry is comprised of enterprises taking part in the same or similar types of economic activity (Statistics SA, 2009a). The National Association of Automobile Manufacturers of SA [NAAMSA] (2009) defines the SA automotive industry as being comprised of three automotive sectors, namely the automotive parts manufacturing sector, retail sector and vehicle production sector.

Because this research took place at the time of the global economic recession, this was included as a potential factor affecting the work-family balance of managers employed in the SA automotive industry. This study is consequently of relevance due to the fact that the SA

automotive industry has been deeply affected by the current global financial crisis, with new vehicle sales in the month of May 2009 dropping 34.7 percent year on year (Dlamini, 2009). Employees are presumably affected in terms of their workload, yet no research has been conducted on the impact of the current recession on both the work and family involvement of employees in SA. In order to explore this, a number of hypotheses were set.

Hypotheses

H₁: Female managers will have lower levels of work involvement than will male managers.

H₂: Female managers will have higher levels of family involvement than will male managers.

H₃: Managers who have high levels of family involvement will have higher levels of work restructuring.

H₄: Managers who have low levels of work involvement will have higher levels of work restructuring.

H₅: The current global recession results in managers experiencing lower levels of family involvement.

H₆: The current global recession has resulted in managers having higher levels of work involvement.

LITERATURE REVIEW

Work and family involvement

According to Gambles, Lewis and Rapoport (2006:4), paid work is becoming increasingly invasive and demanding in the lives of individuals, diverting time and energy from other parts of people's lives that are of equal value to them. Aspects of an individual's life that are critical for their well-being, such as time spent with children or friends, is often forced out by these work patterns. As the demands of paid work increase, so, too, do the difficulties in combining work with care responsibilities. Taris et al. (2006) also state that working intensely may yield favourable outcomes, such as high earnings, prestige, satisfaction and promotional opportunities, but this may occur only at the expense of minimising non-work obligations in order to have sufficient chance to recover from work efforts.

According to Bunting (2004, in Gambles et al., 2006), the more intensely an individual works and the longer his or her hours, the more pressure he or she experiences. This is especially true for managers, who experience immense amounts of work pressure daily. Constant connectedness via access to technology has also resulted in it being difficult for many people to be able to disconnect themselves from their paid work (Gambles et al., 2006).

Bauman (2003, in Gambles et al., 2006) furthermore states that the demands of modern workplaces are often in opposition to the values required to maintain a healthy family life.

Various trends, such as having to care for the children of parents who have died from HIV/AIDS, further result in it being difficult for individuals in diverse situations to conform to 'ideal' worker assumptions, while simultaneously caring for family members (Gambles et al., 2006:61). Thus, working families that come from developing countries such as SA face similar dilemmas to those from industrialised nations in terms of harmonising paid work with other areas of their lives (Heymann, Earle and Hanchate, 2004), but their problems are multiplied by significantly higher care-giving burdens as well as fewer resources.

Gottfried and Gottfried (2008:33) suggest that in order to meet the dual demands of parenting and employment *and* maintain a balance between paid work and family involvement, employed mothers tend to redistribute their allocation of time. Examples of time redistribution may include allocating less sleep and less leisure time. This insinuates that families generate adaptations to support the needs of their children, often through the reallocation of parents' commitments. The same authors also assert that the most significant adaptation to have taken place in homes where both mothers and fathers are employed is the increase in the involvement of fathers with their children. An increase in father involvement in caretaking also offers more egalitarian models of work-family balance as well as new role models for children of dual-earner couples (Casad, 2008:279).

Work restructuring

Restructuring one's work in order to meet family responsibilities occurs when individuals make the decision to limit certain work behaviours in the interest of their family life (Hertz, 1986, in Karambayya and Reilly, 1992). Klein (2008:232) explains that this flexibility is the ability of a manager and an employee to determine where, how and when work is to be completed. The specific terms and conditions of employment will determine whether or not flexible work arrangements will offer an opportunity to better integrate work and family life, with the degree of control over work schedules being of particular importance (Van Doorne-Huiskes, Den Dulk and Peper, 2005:5). According to Karambayya and Reilly (1992), jobs that are most likely to have the option of work restructuring are those where one's work is performed relatively independently, and when one's work hours are relatively unstructured. For these reasons, managerial and professional work can often be restructured. When individuals have control over their work schedules, they are better able to coordinate weekend work and spend longer hours with their families. Those with autonomy in their work

are therefore better able to limit the negative effects of workload pressure on family life (Voydanoff, 1988).

Organisational flexibility According to Warren and Johnson (1995), a family friendly organisation is supportive of its employees who are combining family roles with paid work. Many employers and organisations have created work-family policies as a result of the changing demographics of the workforce, in order to assist in supporting the family responsibilities of their employees (Tan, 2008:5). When employees know that their organisation supports them in their care-giving roles, they can more adequately fulfil their work and family demands. Consequently, less strain will be experienced between work and family roles (Warren and Johnson, 1995), thus reducing anxiety when coordinating family and work responsibilities. Flexible working patterns that can be offered by organisations include part-time work, job sharing, staggered hours, flexitime, compressed hours, shift swapping or flexible working locations (Department of Trade and Industry, 2004).

The global economic recession

Statistics SA announced on the 25th of May 2009 that the country's gross domestic product growth had slowed by -6.4 percent in the first quarter of 2009 (Mtshali and Mahlangu, 2009). This resulted in the announcement that SA was officially in a recession, the first in 17 years. An increased loss of jobs was predicted, as businesses in the country attempted to survive by cutting costs through retrenchments.

The SA automotive industry The contribution of the SA automotive industry to SA's gross domestic product was calculated at 7.29 percent for 2008 (NAAMSA, 2009). Although SA has been able to weather the current global financial crisis relatively well, there have been effects on the local automotive industry (Thomaz, 2009). On the 15th of May 2009, NAAMSA (2009) released its quarterly review of business conditions of the motor vehicle manufacturing industry for the first quarter of 2009. This stated that industry employment had declined by 2571 jobs as a result of the "extremely difficult operating environment", characterised by lower domestic new vehicle sales as well as lower export sales. It was expected that the operating environment in all sectors of the industry would only begin to show a slight improvement domestically during the second half of 2009.

How the recession has affected work and family involvement Due to the economic downturn, many automotive industries have downsized to become more efficient. According to Gambles et al. (2006:48), downsizing results in an increase in individual workload, intensification of work, as well as the pace of work to be performed. Furthermore, employees

may experience an increase in perceived or actual job insecurity. This increased feeling of pressure together with a fear of unemployment may further cause employees to overwork themselves, leading to stress and burnout. In terms of family involvement, Hanes (2009) explains that the economic downturn has resulted in the adjustment of roles and relationships at home, such as by recalculating who performs the family duties. Many families have begun to balance their duties and, with many men in the manufacturing and construction sectors losing their jobs, husbands often find themselves staying at home to look after their children while their wives work. Yet, many men appreciate the positive side of this situation, because more time is now spent with their families than before the recession occurred.

RESEARCH METHODOLOGY

Sampling method

The study was conducted during an eight-month period, March 2009 until October 2009. Data collection occurred during the months of June and July 2009. Control categories were established for the target population, including that the participants were to be managers working in the SA automotive industry, and were to have at least one child 18 years of age or below living at home at the time of the study.

Non-probability sampling was used, in the form of convenience and snowball sampling. A total of 1148 managers were contacted via e-mail and were requested to take part in this study, of which 131 individuals fully completed the electronic questionnaire. This indicates a response rate of 11.4 percent. This sample size was deemed sufficient for the purposes of an exploratory investigation.

**TABLE 1:
DEMOGRAPHIC PROFILE OF THE SAMPLE (n=131)**

Gender	n	Percentage
Male	28	21%
Female	103	79%
Age	n	Percentage
21-30 years	16	12%
31-40 years	50	38%
41-50 years	51	39%

50+ years	14	11%
Race	n	Percentage
White	107	82%
Black	6	5%
Indian	8	6%
Coloured	10	8%
Number of children 18 years of age and below per household	n	Percentage
1	53	40%
2	53	40%
3	20	15%
4+	5	4%

Table 1 above summarises the demographic data collected on the sample. Notable findings include that the majority (82 percent) of the sample was white, a result that occurred despite hopes that the sample would be more racially diverse. Additionally, when compared to SA's distribution of female (29.9 percent) versus male managers (70.1 percent) in the first quarter of 2009 (Statistics SA, 2009b), it is evident that the sampled gender distribution is proportional with the population's gender distribution.

Research Technique

A quantitative research technique was utilised for this study and an electronic survey method was employed to collect the data. A verbal anchored five-point Likert scale was adopted in the questionnaire.

Instruments utilised in Work-Family Involvement questionnaire The questionnaire was sub-divided into five sections. The first section, entitled "Work Involvement", was based on Hackman and Lawler's (1971) adaptation of the Lodahl and Kejner (1965) scale, found in Karambayya and Reilly (1992). Because this scale is rather dated, the researchers added two items to the existing three items of the scale, in order to make the measure more relevant in the present global context.

In the section entitled “Family Involvement”, Brett and Yogev’s (1985:165) instrument was used as a basis to measure this variable. The original Family Involvement scale by the same authors comprised of 11 items, which focused on the importance of the roles of parent and spouse to the respondent. Because the present study involved both married and unmarried managers, the four spouse-related items were removed from the original instrument, resulting in a seven-item scale.

The third section of the questionnaire, entitled “Work Restructuring”, was based on seven open-ended questions adopted from Karambayya and Reilly’s (1992) research. These questions focused on how respondents resolve the regular conflicts between work and family. The questions were rephrased to be measured on a Likert-scale. One item that mentioned accommodating spousal needs was removed, for the same reasons mentioned above. This was replaced by a question concerning how respondents’ organisations assist them in having a healthy balance between work and family life, through offering the option of restructuring work to meet family needs.

The fourth section was entitled “Global Recession” and comprised six Likert-scale items constructed by the researchers. This section’s questions concerned how the respondents’ involvement in their work and family lives has been affected by the global recession.

The fifth and final section of the questionnaire, “Demographic Information”, detailed five categories necessary for statistical purposes, namely the respondent’s gender, age, race, marital status and number of children 18 years of age or below who currently live at the respondents’ homes.

Data analysis

Descriptive and inferential statistics were used for data analysis. The latter employed the statistical package STATISTICA, version 8.0. The four factors explored were Work Involvement, Family Involvement, Work Restructuring, and Global Recession, shortened to *Work, Family, Restruct* and *Recession*.

Pearson product moment correlations were calculated for the four factors. The purpose of these correlations was to summarise the strength of association between two or more metric variables (Malhotra, 2007:536). Furthermore, the Chi-square statistic was calculated in order to test the statistical significance of the observed association in a cross-tabulation, to assist in determining whether a systematic association exists between two variables (Malhotra, 2007:474). For the purposes of the cross-tabulations, it was calculated that a response of

between 1.00 and 2.59 on the Likert-scale would fall into the 'Low' category; a response of between 2.60 and 3.40 would fall into the 'Average' category; and a response of between 3.41 and 5.00 would fall into the 'High' category. The Family Involvement factor was not included for this analysis, as not enough 'Low' and 'Average' observations were available. The statistical significance level was set at $\alpha = 0.05$. Finally, *t*-tests were conducted as univariate hypothesis tests using the *t* distribution.

Reliability and validity To assess the reliability of the summated scale scores of the four factors, Cronbach's coefficient alpha was calculated for each scale. All scales had Cronbach coefficient alphas above the suggested 0.60 criterion for satisfactory internal consistency in exploratory research (Malhotra, 2007:285). The interpolated minimum factor loading regarded significant is 0.482 for a sample size of $n = 131$ (Hair et al., 2006:128). Face validity was determined through expert analysis of the questionnaire, with the result that the questionnaire's format, language usage and concepts were relevant to the study. Additionally, content validity was attained through linking the items in the questionnaire with the information in the literature review.

Ethical considerations

Participation in this study was voluntary and respondents were informed about the research topic and control categories. All respondents were informed that their anonymity would be maintained and that all information gathered would only be used for research purposes. This ensured that the moral obligation of the researcher to uphold the confidentiality of the data was met.

RESULTS/FINDINGS

TABLE 2:

PEARSON PRODUCT MOMENT CORRELATIONS FOR THE FOUR FACTORS

	Family	Restruct	Recess
Work	-.023	-.173	.250
Family		.310	-.046
Restruct			-.190
Statistical significance: $r > .144$			
Practical significance: $r > .300$			

Table 2 above indicates the Pearson Product Moment Correlations for the four factors. It is evident from this table that only the relationship between Family Involvement and Work Restructuring is practically significant, with $r > 0.300$. Furthermore, there is a statistically significant relationship ($r > 0.144$) between Work Involvement and Work Restructuring, and between Work Involvement and Global Recession.

TABLE 3:
t-TESTS FOR WORK AND FAMILY INVOLVEMENT

	Male (n=103)		Female (n=28)		t-value	p
	Mean	SD	Mean	SD		
Work	3.38	0.70	3.16	0.87	1.43	.154
Family	4.19	0.47	4.20	0.75	-0.09	.930

t-Tests that were conducted for work and family involvement resulted in neither of the p -values being greater than the significance level of 0.05, as indicated in Table 3 above. There was thus insufficient statistical evidence to generalise the findings for the population from which the sample was drawn. Because these findings were not statistically significant, and in fact were not even reportable, Cohen's d statistic was not calculated to determine practical significance.

TABLE 4:
RELATIONSHIP BETWEEN GENDER AND WORK INVOLVEMENT

	Work			
	Low	Average	High	Totals
Female	6	13	9	28
Male	7	57	39	103
Totals	13	70	48	131
	Pearson Chi² = 5.72 p = .072			

Table 4 indicates the cross tabulation per gender for Work Involvement. The Chi-square statistic for this relationship is also indicated. The degrees of freedom (d.f.) was calculated as 2 for the table. From the table it can be concluded that the relationship between gender and work involvement is not statistically significant, as the p -value is greater than 0.05. Because the result did not indicate statistical significance, Cramér's V was not calculated to determine practical significance.

**TABLE 5:
RELATIONSHIP BETWEEN WORK INVOLVEMENT AND WORK RESTRUCTURING /
GLOBAL RECESSION**

		Restruct				Recess			
		Low	Average	High	Totals	Low	Average	High	Totals
Work	Low	1	4	8	13	4	6	3	13
	Average	8	20	42	70	18	17	35	70
	High	10	20	18	48	10	9	29	48
	Totals	19	44	68	131	32	32	67	131
		Pearson Chi² = 6.72 p = .151				Pearson Chi² = 6.49 p = .166			

Table 5 indicates the cross tabulations of Work Involvement with Work Restructuring and Global Recession. The Chi-square statistic for each relationship is also indicated. The d.f. was calculated as 4 for the table. From the above it can be concluded that none of these relationships are statistically significant, as all *p*-values are greater than 0.05. Because the results did not indicate statistical significance, Cramér's V was not calculated to determine practical significance.

Hypothesis testing

In terms of gender cross-tabulations, Table 4 shows that the *p*-value for the relationship between gender and Work Involvement was 0.072. It was thus concluded that this relationship was not statistically significant, as the *p*-value was greater than 0.05. Taken into consideration with the findings from Table 3, which also indicated a lack of a statistically significant relationship, hypothesis one was rejected.

Hypothesis two was also not supported, as the *p*-value for Family Involvement from Table 3 (0.930) is greater than the significance level of 0.05, indicating that this relationship is also not statistically significant.

Table 2 indicates that there is a positive relationship between Family Involvement and Work Restructuring that is also practically significant, with $r > 0.300$ required for practical significance. This provides support for hypothesis three.

Regarding hypothesis four, it is indicated in Table 2 that there is a weak negative relationship between Work Involvement and Work Restructuring. This relationship is

statistically significant, due to its correlation value of -0.173 being greater than the significance value of 0.144 . However, Table 5 indicates that the relationship between Work Involvement and Work Restructuring is not statistically significant, as the p -value (0.151) is greater than the significance level of 0.05 . Judgement will thus be withheld, as there is evidence partially in support of and partially in conflict with this hypothesis.

Table 2 indicates that there is no evidence in support of hypothesis five, as no statistical relationship exists between Family Involvement and Global Recession ($r < 0.144$). Hypothesis five is thus rejected.

Finally, according to Table 2, the relationship between Work Involvement and Global Recession has a correlation value of 0.250 , indicating a statistically significant, positive relationship between these two factors. However, Table 5 indicates that this relationship is not statistically significant, as the p -value (0.166) is greater than the significance level of 0.05 . Judgement will thus be withheld for hypothesis six, as there is evidence partially in support of and partially in conflict with this hypothesis.

CONCLUSIONS

Literature suggests that males have higher levels of work involvement than females, due to gender stereotypes as well as the fact that it is often more difficult for men to reduce their involvement in work (Gambles et al., 2006:73). However, hypothesis one was rejected in this study, suggesting that men and women are equally involved in their work. This supports findings by Mantler and Murphy (2005) and Singh, Finn and Goulet (2004), who found no significant gender differences in levels of work involvement. Long work hours and high levels of work involvement are characteristic of managerial roles (Byron, 2005), whether a male or female fills that role.

In terms of hypothesis two, it was predicted that female managers would experience higher levels of family involvement than their male counterparts. This, however, was not confirmed. The researcher notes that the reported high levels of family involvement may be as a result of socially desirable answers. Regardless, the fact that male and female managers are equally involved in their family domains is a positive result, as this suggests that traditional gender stereotypes and social norms, whereby females are more involved in the area of family responsibilities, is changing. The literature does confirm this, with studies by Gregory and Milner (2008) as well as Nepomnyaschy and Waldfogel (2007) indicating rising levels of family involvement by fathers, as well as increased levels of paternity leave being taken.

Positively, it can also be noted that hypothesis five was rejected, with no support that family involvement levels across genders has decreased due to the current global recession. Families are apparently not suffering during the recession by having “managerial parents” exert less effort and fewer hours into the family domain. White (2009, in Shim, 2009) explains that many parents in the United States are in fact creating more time to spend with their families during the recession, as they feel that they have a greater need to become involved in the lives of their children.

Support was received for hypothesis three. This indicates conclusively that those managers with high levels of family involvement do restructure their work to a greater extent. This is in contrast to Brett and Yogev (1988:167,170), who found that for both males and females, family involvement was not correlated with work restructuring levels. The implication of this finding is that in order to spend more time with their families, managers ensure that they restructure their work through accommodations such as flexitime or time off for time worked, usually in consultation with their employers.

Because no conclusive evidence was gained for hypothesis four, it cannot be fully supported that managers with low levels of work involvement would have higher levels of work restructuring. This is in line with evidence from the literature. For example, Brett and Yogev (1988:170) state that females who are highly involved in their work restructure significantly less than those less involved in their work, but male’s work restructuring levels are not related to their work involvement levels.

It was also not proven that the current global recession has resulted in managers having higher levels of work involvement (hypothesis six). This inconclusive result was against the researcher’s expectations, as literature points towards increased work involvement levels as organisations deal with effects of the recession, such as downsizing. A possible reason might be that all sectors of the automotive industry were included in the sample. Thus, although members of manufacturing organisations might be faced with a greater workload and work pressures, those in the retail sector might face the opposite, with decreased vehicle sales during this slow economic period.

MANAGERIAL IMPLICATIONS AND RECOMMENDATIONS

Many employers worldwide have implemented work-family policies to assist in supporting their employees’ family responsibilities, and to assist in creating a work environment in which employees’ family demands are supported. These policies should be implemented in the

automotive industries studied for this investigation, thereby assisting employees in restructuring their working hours to accommodate the needs of their families. Furthermore, because it has been shown that no gender differences occurred for work or family involvement, it can be recommended that organisations make their work-family policies available to both male and female employees without the occurrence of bias or gender preconceptions. Male managers should therefore not be ostracised for wishing to make use of employer accommodations such as flexitime.

Automotive industry organisations are also encouraged to consult with their managers to discuss ways of assisting their achievement of work-family balance. They should also implement accommodations that will be most effective in allowing employees to restructure their work. In doing so, work-family policies can provide increased profits through producing more committed, loyal employees who will be likely to return after a family-related absence, and less likely to leave their employers in general (Halpern, 2008:220). An organisation should develop a culture of flexibility so that a variety of work arrangements can be incorporated. This will ensure that employees benefit from being provided with greater individual control to achieve both personal and professional objectives.

Because female respondents in this study were found to have equal levels of work involvement as their male counterparts, organisations should attempt to develop female managers and lower-level employees through appropriate mentoring programmes. This will assist female employees by giving them a platform to discuss their work and family issues with other women in similar situations.

Limitations and future areas for research

A limitation to this research was the small response rate, especially in terms of female respondents. The study also did not investigate whether differences in family involvement exist between parents of children of varying ages. For example, work restructuring differences might occur for parents of babies, compared to parents of teenage children, due to the fact that teenagers are supposedly more independent. The levels of stress caused due to the recession and how this affects family relations might also be investigated in future studies. The different sectors of the automotive industry should be investigated independently, and further research concerning the effects of the recession on employees in all sectors of the SA economy should be conducted.

The patterns found in this research provide a glimpse into the current values of managers in the SA automotive industry. Because some of the results were inconclusive, more research

is required to fully understand this topic. However, the investigation provides valuable insight into the work and family lives of managers during a tough economic time in SA. It contributes to the literature on work and family involvement levels of managers, and also provides insight into how the global recession has affected the lives of managers in the SA automotive industry.

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CUSTOMER PERCEPTIONS OF GREEN MARKETING IN THE PORT ELIZABETH RETAIL INDUSTRY

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ABSTRACT

The purpose of green marketing is to make customers aware of green products and the need to preserve the environment. This paper explores the perceptions of customers on green marketing in the Port Elizabeth retail industry. One hundred customers were interviewed or completed the self-administered structured questionnaire. Descriptive statistics were utilised to analyse the results of the structured questionnaires. The results showed that although there is an increase in green marketing in the last decade many respondents do not regard themselves as green customers. Respondents indicated that retailers also fail to engage effectively in their green marketing efforts. Specific guidelines are outlined on how retailers could address their retailing mix to go green.

KEYWORDS: Green marketing; green customer; retailing mix

INTRODUCTION AND BACKGROUND TO THE STUDY

The concern over the environment has spread into the corporate world. Although businesses primarily operate for the benefit of shareholders, they have a wide-ranging set of responsibilities that include responsibilities to their employees, to customers and suppliers, to the communities in which they are located, and to society at large (Boatright 2003:371). The King II (as well as the King III) report identifies social responsibility, which is the organisation demonstrating commitment to appreciation of the social, environmental and

economic communities in which it operates, as one of the seven primary characteristics of good governance. (Hough Thompson, Strickland and Gamble 2008:177-178). Businesses are thus encouraged to align their business strategies with environmental commitment. However, there are issues preventing businesses from engaging in becoming green and utilising green marketing such as, legitimacy, cost, efficiency and scope and complexity thereof. It is required that the way business is done should change (Post, Frederick, Lawrence and Weber 1996:46).

Knowledge forms the basis of environmental awareness and beliefs (D'Souze 2007:71). Changes in the demand for environmentally friendly products are connected to modify customer behaviour patterns and occur when customers support the idea of preserving the environment (Hopfenbeck 1993:179-180). According to Hoyer and MacInnis (2007:500) the trend towards the use of green products is growing. Manufacturers are even developing products with recyclable and biodegradable parts. Newman (2006:34) remarks that customer interest in natural and organic foods appears to have extended also into personal care products.

Marketing is known to be influential in shaping peoples lifestyles and attitudes. Green or Environmental Marketing consists of all activities designed to generate and assist any exchanges intended to satisfy human needs or wants, ensuring that the satisfaction of these needs and wants occurs, with minimal harmful impact on the natural environment (Grundey and Zaharia 2008:131). Therefore green marketing has the potential to help persuade people (customers) to shift their lifestyles and to go green through education, by extending green culture and lifestyles beyond middle class to working class, and by making green choices attractive (Grant 2007:32-33).

Already in the nineties, Post *et al.* (1996:47) recommend that social-, environmentally-, and worker friendly practices should be an integral part of all businesses. Sellers of products have a particular obligation to make the products as environmentally friendly as possible (Maidment and Eldridge 2000:237). Customers require information about green products and the importance for sustaining the environment. Retailers therefore should explore information about green marketing in order to supply and market green products and aid in sustaining the environment.

The purpose of this paper is therefore to explore the perceptions of customers regarding green marketing in the Port Elizabeth retail industry. Firstly, the problem statement and objectives of the study are provided. A theoretical exposition of what green marketing entail

will be outlined. Thereafter, the research methodology of the study will be highlighted. The research results will be given, followed by the main conclusions. General guidelines on how retail businesses in Port Elizabeth can adapt their retailing mix to increase green marketing awareness among customers are also indicated.

OBJECTIVES OF THE STUDY

The primary objective of this study is to explore the perceptions of customers on green marketing in the Port Elizabeth retail industry. To help achieve the primary objective of the study, the secondary objectives are:

- To give a theoretical overview of green marketing;
- To investigate customer awareness of green products in the Port Elizabeth retail industry;
- To gauge the perceptions of customers on the extent to which the Port Elizabeth retail industry engage in green marketing; and
- To provide guidelines to retail businesses in Port Elizabeth as how to adapt their retailing mix to increase green marketing awareness among customers.

In the next section the problem statement will be outlined.

PROBLEM STATEMENT

Many businesses have incorporated high environmental standards into their production and marketing strategies, paving the way for a new pro-environmental approach in marketing, known as “green marketing” (Alsmadi 2007:340). Green marketing is concerned with designing, developing and delivering products that are eco friendly to the environment and its stakeholders (Chitra 2007:174). Green or environmental marketing consists of all activities designed to generate and assist any exchanges intended to satisfy human needs or wants, ensuring that the satisfaction of these needs and wants occurs, with minimal harmful impact on the natural environment (Grundey and Zaharia 2008:131). According to Grant (2007:32-33) green marketing has the potential to help persuade people (customers) to shift their lifestyles and to go green. Going green can be encouraged through education, by extending green culture and lifestyles beyond middle class to working class, and by making green choices more attractive.

There is thus a need for retailers to practice green marketing and promote products that are environmentally friendly (Investor dictionary.com 2009:1). Green marketing presents unique challenges, such as what can be regarded as a green product or a green business.

However there is a rise of green customers and along with it the rise of eco-labelling, green advertising and the importance of environmental reporting (GreenBiz.com 2009:1).

The above discussion leads to the research question to be addressed in this paper:

What are the perceptions of customers regarding green marketing in the Port Elizabeth retail industry?

Ambec and Leonie (2008:46, 57) indicate that businesses, such as retailers, can benefit from being more environmentally aware as it can lead to better financial performance, increasing revenues, having better access to certain markets, and more distinct product differentiation. The cost reductions can include a decrease in the cost of material, energy and services, cost of capital and cost of labour. Therefore it can be seen that expenses incurred to reduce pollution can be partially or completely be offset by gains made elsewhere.

In the next section a theoretical overview of green marketing is given.

A THEORETICAL OVERVIEW OF GREEN MARKETING

What is green marketing?

Green marketing has the same goals as traditional marketing, which is to satisfy human needs or wants but also seeks to accomplish that with minimal harmful impact on the natural environment (BNET Editorial 2009:1). A green marketing approach starts with integrating environmental issues into all aspects of the businesses activities inter alia strategy formulation, planning, construction through production process as well as dealings with customers (Grundey and Zaharia 2008:135). West, Ford and Ibrahim (2006:440) stated that green marketing involves the actions undertaken by a business that aimed at improving or preserving the environment surrounding the business. In the next section the definition of what a green customer entails will be given.

What is a green customer?

Alsmadi (2007:342) states that green customers are environmentally conscious customers who are loyal to green products. Green consumerism, on the other hand, is a pro-environmental customer culture characterised by a strong sense of environmental responsibility in consumption behaviour. The most important issue surrounding green customer segmentation is determining if environmental awareness can be viewed as a major

driving force for green consumerism. Grant (2007:29) proposes that going green means challenging the customers' way of life by changing individual lifestyles and reducing the use of harmful resources. This requires taking into account the variables influencing customers when making a purchasing decision such as (Du Plessis and Rousseau 2007:276):

- Individual (needs, motives, personality, perception, learning and attitudes); and
- Environmental (culture, social influences, reference groups, family, economic conditions, marketing and business influences).

Furthermore, retailers must take cognisance of possible reasons that prompt customers to buy green products or services. Some reasons why customers buy green products or services are for:

- *Efficiency and cost effectiveness* e.g. tax incentives for fuel efficient cars; energy saving home improvements appliance models (Ottman, Stafford and Hartman 2006:28);
- *Health and safety* e.g. containing no toxic agents, fewer pesticides, herbicides or chemical used; no mercury and are not genetically modified (Gordon 2009:1; Lincoln and Thomassen 2008:142; Ottman *et al.* 2006:28);
- *Performance* e.g. low emissive windows filter sun in summer and reduce heat loss in winter (Ottman *et al.* 2006:28);
- *Symbolism and status* e.g. the think chair which is 99% recyclable and disassembles with basic hand tool in about five minutes and the parts are stamped with icons showing recycling options (Ottman *et al.* 2006:28); and
- *Convenience* e.g. CFL bulbs needing infrequent replacements or gas-electric hybrid cars requiring fewer refuelling stops (Ottman *et al.* 2006:28).

Although being knowledgeable on why customers buy green products, no one-size-fits-all marketing strategy for businesses wanting to go green exist (Makower 2007:1). The next section outlines how businesses, in particular retailers, can go green by paying attention to their marketing mix.

The green marketing mix

The marketing mix is a useful tool to categorise the sustainability concepts and tools relevant to marketing decision-making and consists of product, price, place and promotion (Bridges and Wilhelm 2008:39). Dash (2009:1) reiterates that the 4 P's of green marketing are that of conventional marketing but with the challenge of using the 4 P's in an innovative manner to deliver green products that customers will purchase. Hollensen (2003:718-725) has indicated that environmental ethical issues can be integrated into the four Ps. The retailing

mix builds on the traditional marketing mix, which consists of the four Ps and adds two more elements being presentation and staff and customer service (McDaniel *et al* 2006:459) as shown in Table 1.

TABLE 1
ENVIRONMENTAL RETAILING MIX

Retailing mix	Environmental retailing mix	Authors
Product	<ul style="list-style-type: none"> • Have better designed, more efficient, durable, healthy and affordable products. • Introduce environmentally friendly products that are recyclable, biodegradable and energy efficient. • Modify existing products for eco-friendly alternatives, and eliminate environmentally harmful products. • Change to environmental friendly packaging to minimise waste. • Make better alternatives accessible and easy to grasp by making green products seem normal. • Have a brand that reflects the protection of earth's natural resources. 	BNET Editorial (2009:1) Grant (2007:51-53) Hopfenbeck (1993:182) Hoyer and MacInnis 2007:4-5) Nikols (2009:1) Post, Frederick, Lawrence and Weber (1996:384) Shimp (2007:77-78) Uberoi (2003:315)

Retailing mix	Environmental retailing mix	Authors
Price	<ul style="list-style-type: none"> • Create the perception of extra product value such as improved performance, function, design, visual appeal, or taste to justify higher price. • Emphasize the fact that the higher initial cost for the customer leads to lower long-term costs. • Cut cost of packaging and waste disposal to reduce prices of green products. • Inform customers about social and environmental costs of green products to justify prices. • Sell good quality environmentally friendly products at a reasonable price as customers are price sensitive. 	Baker and Hart (2008:580) Dash (2009:1) D'Sourze (2007:70) Gordon (2009:1) Hollensen (2003:720)
Place	<ul style="list-style-type: none"> • Use greener logistics such as recycling transit packaging, optimisation of distribution routes and adopting fuel efficiency driving practices. • Cut down on transportation emissions to reduce the carbon footprint. • Choose carefully where and when to offer green products as few customers will go out of their way to buy green products. 	Baker and Hart (2008:580) Dash (2009:1) Hollensen (2003:718) Narayana and Babu (2008:1)

Retailing mix	Environmental retailing mix	Authors
Promotion	<ul style="list-style-type: none"> • Use green advertising stressing the relationship between products or services and the biophysical environment. • The advertising message must promote a green lifestyle. • Sponsor environmental protection events to enhance a corporate image of environmental responsibility. • Have special sales promotions for ecological products. • Emphasize the idea of sustainability to improve quality of life for now and for future generations in promotions. • Encourage customers to buy products by showing them their most basic needs and desires are satisfied. • Advertise in magazines and on web sites that environmentally conscious customers read. • Cross-promote products or services with other “green” businesses that cater for health conscious customers). 	Boatright 2003:283) Dash (2009:1) Grant (2007:51-53) Grundey and Zaharia (2008:132-133) Marketing a green company (2006:1) Shimp (2007:78)
Presentation	<ul style="list-style-type: none"> • Project the stores image through its atmosphere. • Position the green retail store in the customers mind in terms of paying attention to physical layout, décor and surroundings. • Display a certificate showing being environmentally responsibility. 	Marketing a green company (2006:1) McDaniel <i>et al</i> (2006:459)

Retailing mix	Environmental retailing mix	Authors
Staff/Customer service	<ul style="list-style-type: none"> • Create a customer-salesperson relationship to persuade customers to buy. • Encourage word-of-mouth advertising to attract new customers. 	Levy and Weitz (2004:620-621) McDaniel <i>et al</i> (2006:461-462)

McDaniel *et al.* (2006:454) indicate that retailers combine the elements of the retailing mix as outlined in Table 1 to come up with a single retailing method to attract the target market. The combination of the six Ps creates a stores image in the mind of customers, which then influences their perceptions.

As can be seen, retailers are aware of green marketing and should adapt their retailing mix approaches to incorporate being green. Ottman (2007:1) offers the following advice to retailers on green marketing:

- *Know your customer* - If a greener product is available to be sold to customers, they should be aware and concerned about the issues that the product attempts to address;
- *Empower customers* by making them perceive that their actions will make a difference (Hoyer and McInnis 2007:500);
- *Be transparent* so that customers believe in the legitimacy of the businesses products as well as the specific claims the business makes;
- *Reassure buyers* as customers need to believe that products perform the way they are supposed;
- *Consider pricing* as environmentally friendly products are often higher priced than normal goods, therefore ensure customers can afford the premium price and feel that it's worth paying it.

Narayana and Babu (2008:1) remind retailers that today's customers are becoming more and more aware about environmental problems and are also becoming socially responsible. Businesses therefore need to become more socially responsible as they can benefit in the following ways if going green (Narayana and Babu 2008:1):

- It ensures sustained long-term growth along with profitability;
- It saves money in the long term, even though being initially costly;
- It helps businesses to market products and services while being environmentally responsible;

- It helps in accessing new markets, and in developing and maintaining a competitive advantage; and
- It makes some employees feel proud to be associated with the business.

The above discussion shows that there are benefits for both businesses and customers in going green. Green marketing can be employed to promote preserving the environment and to affect customers' purchasing decisions. By using green marketing customers can be educated about environmental issues and the retailer can be presented in a positive manner. In the next section the research design is outlined.

RESEARCH METHODOLOGY

The purpose of the study was to explore the perceptions of customers regarding green marketing in the Port Elizabeth retail industry.

Research approach

The study was conducted using the quantitative paradigm, which is a form of conclusive research using large samples and reasonable structure data collection procedures (Struwig and Stead 2007:4). The descriptive research approach was used to describe the green marketing perceptions of customers in the Port Elizabeth retail industry.

Sampling

For the purpose of this study the population could be regarded as all customers buying from Port Elizabeth retailers. A non-probability sampling procedure was used and a convenient sample was drawn, purely on the basis of availability and accessibility and being quick and economical (Learn Marketing.net 2007:1). Snowball sampling was also used as respondents gave some of the questionnaires to friends. The final sample comprised 100 respondents who were customers of retail stores in the Port Elizabeth area. When selecting the sample, no specific group of people was targeted. The only requirements were that:

- Respondents must be employed; and
- Respondents must be customers of retail stores in Port Elizabeth.

Data collection

Secondary sources were consulted on green marketing, and retailing from the library, journals as well as through an extensive Internet search. The empirical data was collected by means of a survey. The data were collected using a self-administered structured questionnaire. Two hundred questionnaires were distributed, but the final sample was only 100 questionnaires due to non-returns and incompleteness.

Questionnaire design

The types of questions asked in the questionnaire included rating-, Likert scale- and open-ended questions. A 5-point Likert scale was utilised for the structured questions. The structured questionnaire consisted of the following five sections:

- Section A canvassed biographical data;
- Section B explored the awareness of and perceptions of customers regarding green marketing;
- Section C investigated the reasons why customers buy green products or services;
- Section D determined the extent of green marketing in Port Elizabeth retail stores;
- Section E explored the attitude of customers towards preserving the environment and being green customers.

Data analysis

The questionnaire was pre-coded to facilitate data input into Microsoft Excel. The results were analysed using descriptive statistics by calculating the mean scores and frequencies. The results were presented in graphs, tables and charts.

Validity and reliability

Face and content validity were used in the study. The researcher utilised academic experts to confirm face validity of the questions in the questionnaire. Content validity was ensured as the content of the questionnaire was based on the literature findings on green marketing.

A pilot study was conducted with 10 customers to ensure that the questionnaire was worded correctly and to test the reliability. After processing and analysing the data from this pilot study, the questionnaire was refined and some minor changes were made regarding wording, sequence and layout. Welman and Kruger (2001) describe a pilot study as useful to investigate both validity and reliability and also detect any possible flaws in measurement procedures.

The next section will present the findings of the study.

RESULTS AND ANALYSIS OF RESULTS

The results are based on a sample of 100 respondents. The biographical data will be first presented.

Results of the biographical data

Table 2 shows the biographical profile of the respondents.

TABLE 2
BIOGRAPHICAL PROFILE OF RESPONDENTS

Biographical data	Description	%
Age	18-23	7
	24-29	19
	30-39	18
	40-49	25
	50-59	23
	60+	8
Gender	Male	35
	Female	65
Race	Asian	2
	White	70
	Coloured	10
	Black	17
	Other	1
Monthly income	<R3 000	7
	R3 001 – R6 000	16
	R6 001 – R10 000	17
	R10 001 – R15 000	17
	R15 001 – R20 000	14
	R20 001 – R25 000	8
	R25 001 – R30 000	7
	> R30 000	14
Qualification level	Grade 10 – 11	3
	Matric	25
	Certificate	5

Biographical data	Description	%
	Diploma	24
	Degree	24
	Post degree	19
Field of employment	Construction	7
	Education	18
	Health sector	9
	Retail industry	9
	Finance	12
	Marketing	9
	Motor industry	10
	Other	26
Home language	Afrikaans	18
	English	67
	Xhosa	13
	Other	2

As can be seen in Table 2, nearly half of the respondents were between 40 and 59 years of age. There were nearly twice as many female respondents compared to male respondents and the majority of the respondents were white and English speaking. There were no dominant income groups, with most of the respondents earning between R6 000 and R20 000 with some even less than R3 000 monthly. The majority of the respondents had a matric qualification and were employed in various employment fields.

Results of green product awareness of respondents

Table 3 shows the green products respondents bought.

TABLE 3
GREEN PRODUCTS BOUGHT

Type of green product bought	Frequency
Organic food	59
Recyclable products	51
Energy saving equipment/appliances	48
Products made from recycled materials	47
Eco-friendly household cleaners	23
Natural fibre clothing	12
Solar products	7
Eco-friendly footwear	2
Eco-friendly furniture	1
Eco-friendly jewellery	0
Other, specify	0
Total	250

Respondents bought green products with the most popular being organic food, recyclable products, energy saving equipment/appliances and products made from recycled materials. The frequency with which these green products were bought was: always (4%); sometimes (68%); once (16%) and never (12%). Respondents buy green products when there are specials (68%); in-store displays or competitions (3%). As can be seen specials seems to prompt respondents to sometimes buy green products.

Results of the perceptions of customers regarding green marketing

Respondents were asked to rate the extent to which they agreed with statements surrounding green marketing of retailers on a 5-point Likert scale. The results were modified to better interpret and analyse the responses by combining the strongly disagreed and disagreed categories and the strongly agreed and agreed responses as shown in Table 4.

TABLE 4
RESULTS OF PERCEPTIONS ON GREEN MARKETING

	Disagree	Neutral	Agree	Mean

Am aware that green products are available.	10	8	82	3.86
Buy green products because they are environmentally friendly.	11	10	79	3.79
Buy green products because of their quality.	22	25	53	3.36
Buy green products because of their brand name.	56	23	21	2.59
Buy green products because they are healthier than other products.	27	19	54	3.33
Buy green products as they are in the long-term better products.	33	24	43	3.15
Regard buying green products as a status symbol.	63	14	23	2.54
Am prepared to pay more when buying green products.	55	22	23	2.66
Think higher priced green products are worth it.	42	35	23	2.83
Think green products taste better than other products.	43	29	28	2.85
Am aware that retailers have 'green' sponsorship programmes.	61	16	23	2.56
Read magazines that advertise green products/services.	60	24	16	2.47
Will go to different shops to obtain a particular green product.	72	17	11	2.24
Read product labels prior to buying to ensure it is a green product.	51	32	17	2.57
Try new green products with attractive packaging that's eye catching.	26	38	36	3.08
Believe in green products if retailers can substantiate claims made.	24	35	41	3.19
Am more aware of green marketing now than five years ago.	10	19	71	3.76
Shop at specific retail stores because of the overall store image.	36	38	26	2.91

As can be seen in Table 4, according to the mean scores (from 2.24 to 3.86), respondents varied in their responses on how aware they are of green products and what prompt them to buy it. The majority of the respondents were aware green products are available (82%) and they chose to buy them because they do not harm the environment (79%). Respondents were more aware of green marketing now than five years ago (71%). Respondents bought green products because of its quality (53%), or if it was healthier than other products (54%). Most of the respondents (72%) would not shop around for a particular green product if being unavailable. Furthermore, respondents would not buy green products because of brand name (56%); and did not regard green products as a status symbol (63%). They were not prepared to pay more for green products (55%), are not aware that retailers have 'green' sponsorship programmes (61%); and did not read magazines that advertise green

products/services (60%); or read product labels before buying a product to ensure that it was a green product (51%).

The results of the extent of green marketing in retail stores

The results of the extent to which retail stores engaged in green marketing are shown in Table 5.

TABLE 5
RESULTS OF THE EXTENT OF GREEN MARKETING IN RETAIL STORES

Retail stores...	Disagree	Neutral	Agree	Mean
Communicate the benefits of green products.	52	23	25	2.68
Advertise products/services by promoting a green lifestyle.	48	22	30	2.75
Make me feel I am making a difference when purchasing green	52	22	26	2.66
Make sure that I am aware of green products/services.	48	26	26	2.77
Sell products that perform the job they are supposed to.	25	29	46	3.19
Have promotional information and offerings on green products.	41	34	25	2.79
Provide enough information about green products.	54	29	17	2.57
Sell green products in attractive packaging.	47	34	19	2.68
Always have a variety of green products available.	55	25	20	2.62
Are concerned about how their actions can affect the	53	23	24	2.62
Charge fair prices for green products.	64	25	11	2.34

The results in Table 5 indicated that about half of respondents' perception are that retail stores do not: communicate the benefits of green products (52%); provide enough information about green products (54%); make them feel like they are making a difference when purchasing green products (52%); always have a variety of green products available (55%); concern themselves about how their actions can affect the environment (53%); advertise products/services by promoting a green lifestyle (48%); make sure customers are aware of green products/services (48%); or sell green products in attractive packaging (47%). Many (64%) of the respondents did not think retail stores charge fair prices for green products. Only some (46%) respondents believed retailers sell products that perform the job it is supposed to do. Many neutral responses were indicated meaning that respondents were at some stage undecided about retail stores' approach to green marketing.

The means for the results on green marketing in retailer stores ranges between 2.34 and 3.19 indicating that on average respondents were undecided whether retail stores are engaging in effective green marketing. In the next section the results of the reasons why respondents buy green products are given.

Results of reasons for buying green products

Table 6 outlines the reasons why respondents buy green products.

TABLE 6
REASONS FOR BUYING GREEN PRODUCTS

I buy green products	Very important	Important	Unimportant	Do not know	Mean
As they satisfy my basic needs.	49	43	6	2	2.39
When I am interested in the product.	39	53	6	2	2.29
That suits my personality.	12	20	66	2	1.42
Depending on how I perceive the product to be.	17	45	36	2	1.77
When I have learnt something that I like about the product.	26	48	24	2	1.98
If I like the advertisement of the product/service	7	28	62	3	1.39
If it fits in with my cultural background.	3	13	82	2	1.17
If the product is considered to be socially acceptable.	4	21	73	2	1.27
If my friends think highly of the product.	7	28	63	2	1.4
If my family influences me to buy the product.	18	31	49	2	1.65

Almost all of the respondents (92%) indicated that green products must satisfy their basic needs and they must be interested in buying the product. Respondents also indicated they buy green products depending on how they perceive the product (62%) and when they have learnt something that they like about the product (74%). Respondents did not regard whether the product fits in with their cultural background (82%); is considered to be socially acceptable (73%); suiting their personality (66%); liking the advertisement of the product/service (62%); or whether their friends think highly of the product (63%) as reasons that will motivate them to buy green products. Respondents were divided whether family can influence them to buy green products.

Results of being a green customer

Table 7 shows how respondents regard themselves in terms of being green customers.

TABLE 7

BEING A GREEN CUSTOMER AND WHY

Green customer?	Frequency	Motivation	Frequency
Yes	47	I buy green products	19
		I buy green products whenever I can	21
		Did not give a reason	7
No	53	Retailers do advertise enough or give information on green products	23
		Too expensive	28
		Did not give a reason	2

More customers regarded themselves as not green customers. Respondents described the ideal green customer as:

- People who buy green products (45%);
- People who are conscious of their health and well being (15%); and
- People who are interested in environmental conservation and who recycle (21%).

Thirteen percent of respondents indicated that ideal green customers do not exist while 6% did not respond to the question.

Results of views on preserving the environment

All the respondents, but one (which did not respond to this question) supported the idea of preserving the environment. The reasons given why the respondents support the idea are: only have one earth (13%); it is critical for human survival (40%); soon the earth's resources will be depleted (12%); and it is important for future generations (26%). Nine respondents did not indicate reasons.

The next section presents the conclusions of the study.

CONCLUSIONS

Firstly the conclusions of the biographical data will be given followed by respondents' perceptions on green marketing.

Conclusions of the biographical data

More than half of the respondents were older than 40 years, with two thirds being female, English speaking and White earning between R6000 and R20000 monthly. Most respondents have a matric or above qualification and are employed in various sectors.

Conclusions of green awareness of respondents

Most respondents buy organic food, recyclable products and energy saving equipment/appliances. It seems that these products are available at retail stores or businesses have responded to environmental concerns by introducing environmentally orientated products. It seems that respondents only sometimes buy green products with a few respondents indicating they always buy green products. More than half of the respondents will buy green products if they are on special (sold at a reduced price).

Conclusions of the perception of respondents regarding green marketing

Some respondents buy green products because of quality, or being healthier as also indicated in literature. It appears that most respondents will not buy green products because of their brand name, or regard buying green products as a status symbol, contrary to literature findings. It also seems that respondents are not prepared to pay more when buying green products, as indicated in the literature that customers will buy the green products if they feel the price justify the product's worth. Most respondents agreed that they are more aware of green marketing now than five years ago which indicate that green marketing has improved over the years and that retailers might have become more engage in green marketing. However, many respondents (more than half) indicated that retail stores does not communicate the benefits of green products, provide them with enough information about green products, let them feel that they are making a difference when purchasing green products, have a variety of green products available or are concerned how their actions affect the environment.

Conclusions of the extent of green marketing in retail stores

Many respondents do not think retail stores communicate the benefits of green products, provide enough information about green products, have a variety of green products available, or think retail stores are concerned about how their actions can affect the environment and don't care if their customers buy green products or not. Literature indicates that green promotion must have meaningful links to corporate activities and customers should be empowered to make them feel that they are making a difference when buying green products. It seems that according to many respondents retail stores do not promote a green lifestyle to their customers, make their customers aware of green products/services, sell their green products in attractive packaging, or charge fair prices for the green products that they sell. Overall it seems that respondents are not too impressed with retail stores' green marketing activities or have not made their mind up yet. Literature on the other hand, regards green marketing as important as it promotes environmental awareness. Customers are educated through green marketing and become more aware of how their purchasing and consumption habits contribute towards negatively impacting the environment.

Conclusions of the reasons for buying green products

Almost all respondents will buy a green product if it satisfies their basic needs or if they are interested in the product as also indicated in literature. It seems that how customers perceive a product to be and also when they have learnt something that they like about the product, it influences their purchasing decision. Literature reiterates that learning occurs from remembering a message and storing it in memory and if customers learn about the environmental issues they become more willing to become green customers. It seems that respondents do not make a choice to buy a green product based on if the product suits their personality, whether their friends approve it, or if the products are advertised, contrary to literature findings. Contrary to literature findings almost all the respondents regarded cultural influences as unimportant when buying green products. Respondents were divided in opinions whether family influence plays a role in buying green products. Literature though finds that family life cycle is a major influence on consumption choices and patterns of customers.

Conclusions on preserving the environment

It appears that all respondents, but one respondent (that did not answer the question) supports the idea of preserving the environment confirming the trend towards the use of green products is growing and that customers do care about green issues as stated in literature. Some respondents consider themselves to be green customers. Those who admit to not being green customers complained that retailers do not provide enough green

advertising or information on green products, and that green products are too expensive. Respondents describe the ideal green customer as someone who buys green products, is conscious about their health and well-being and is interested in environmental conservation and recycling.

RECOMMENDATIONS

A summary of the recommendations to retail businesses in Port Elizabeth as how to adapt their retailing mix to increase green marketing awareness among customers is outlined in Table 8.

TABLE 8
GENERAL GUIDELINES FOR GOING GREEN

Retailing mix	General guidelines
Product	<ul style="list-style-type: none"> • Engage in market research to identify target markets basic needs. • Focus on health and safety issues to encourage green product purchases. • Have a wide variety of green products available by buying more green products from the various suppliers and offering more shelf space. • Use effective packaging and labelling to distinguish green products and to convey a message of being environmentally friendly. • Ensure green products can do what it claims.
Price	<ul style="list-style-type: none"> • Carefully consider the price starting with a low price and then increase it once the green product has loyal buyers. • Communicate the additional value to justify the higher prices charged for green products. • Introduce a loyalty programme to encourage repeat sales of green products.
Place	<ul style="list-style-type: none"> • Have green products readily available at many retailers. • Optimise distribution routes for deliveries and adopt fuel efficiency driving practices to reduce the carbon footprint. • Choose the shop location carefully as few customers will go out of their way to buy green products.

Retailing mix	General guidelines
Promotion	<ul style="list-style-type: none"> • Engage in more green marketing and advertising. • Advertise specials of green products. • Use pamphlets to advertise the availability of green products. • Use promotion campaigns linked to sponsorship programmes to show customers your commitment to environmental conservation. • Use television and magazines as educational media to teach customers about green products. • Have point of sale displays at discounted prices to encourage first time buyers.
Presentation	<ul style="list-style-type: none"> • Display green products to be within easy reach and being visible to customers. • Create a favourable image in the store through its atmosphere to attract green customers. • Display environmentally friendly certificates and links to environmental protection sponsorship programmes. • Have eye catching in-store displays promoting green products. • Pay attention to physical layout, décor and surroundings of the shop to portray being environmentally friendly.
Staff and customer service	<ul style="list-style-type: none"> • Introduce a loyalty system to encourage more frequent green product purchases and to help customers feel they are making a difference by buying it. • Staff must provide enough information to customers about green products. • Staff must inform customers about the benefits of buying green products. • Encourage staff to develop a relationship with customers to persuade customers to buy. • Encourage customers to recommend green products or buying from you.

In the next section the limitations of the research and further research opportunities are indicated.

LIMITATIONS OF THE RESEARCH AND FUTURE RESEARCH

The sample could not be regarded as representative of the population. The cost and time frame did not allow for a bigger sample size. Furthermore, it was difficult to get respondents to complete the questionnaire. A more evenly spread sample with regard to gender and race could also be considered.

Possible future research could be conducted to include:

- Respondents younger than 40 years of age could be interviewed to establish the differences in perceptions between younger and older generations regarding environmental concerns.
- Investigating the differences in perceptions regarding green marketing among different cultural groups.
- Investigating the differences between male and females perceptions regarding green marketing and environmental issues.
- Investigating green marketing perceptions of retailers.

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FACTORS IMPACTING E-BUSINESS IMPLEMENTATION IN KENYA: A HYPOTHETICAL MODEL

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ABSTRACT

It is well accepted that most business firms have an objective to grow and survive with the goal of shareholder wealth maximisation. In order to gain a competitive advantage over competitors and to attain business goals in its broadest context, business firms have to embrace new technologies such as Electronic business (E-business). A pertinent question comes to the fore viz. which factors are the drivers that trigger businesses to adopt E-business strategies.

Based on secondary sources, a hypothetical model was constructed and then subjected to empirical testing. Structured questionnaires were electronically sent to businesses that were deemed to be potential respondents. The data collected from 362 usable questionnaires was subjected to statistical analyses. It was evident from the statistical analysis (Cronbach alpha values and confirmatory factor analysis) that the variables and items (statements) in the hypothetical model can be regarded as reliable and valid. A hypothetical model has thus

been constructed to reveal the factors that may impact successful E-business implementation in Kenyan firms.

Key words: E-business implementation, Internet Computer Technology, Micro environment, Market environment, Macro environment

INTRODUCTION

Most business firms have incorporated the Internet as part of their information technology strategy and are today involved in some type of E-business (Daft 2010:426). The internet evolution, as a spinoff from the Knowledge Economy, has been one of the greatest changes and one of the fastest growing consumer services the world has so far experienced since the advent of the industrial revolution (Mutula 2002:504). Laudon and Traver (2002:109) identified three phases that characterised the evolution of the Internet since its inception, namely the innovation, institutional and commercialisation phases. The commercialisation phase was epitomised by government agencies that encouraged private corporations to acquire and expand both the Internet infrastructure and local service network users at large and led to the actual starting phase of E-commerce activities.

Two previous studies explored in this research project are the conceptual model by Iacovou, Benbasat and Dexter (1995:467) focussing on electronic data interchange and the adoption of E-business by small businesses and the study by Fillis, Johansson and Wagner (2004a:184) who identified the variables impacting E-business adoption and development in smaller firms. The variables in the micro, market and macro business environments as discussed by Bosch, Tait and Venter (2006) provided a framework to present the relevant variables in the proposed hypothetical model for E-business implementation.

The potential of contemporary Information Communication Technologies (ICTs) in Kenya is still at present (2009) not yet fully implemented although a significant expansion in usage was experienced through Internet cafés in almost all towns offering telephone services, e-mail facilities and Internet access (ITU 2006). Furthermore, it is estimated that Internet users in Kenya are about 1 054 900 people, in other words about 3.1 percent of the total population. These facilities are frequented by certain groups of people, such as professionals and students, but are still not commonly used by the low-income earners, probably due to not being English proficient and low literacy levels (Mutula 2002:468). In 2006 a Kiswahili language version was introduced in Kenya by MicroSoft Inc. in conjunction with Googles which will hopefully increase Internet access, especially those not well versed in the English language.

The purpose of this paper is therefore to construct a hypothetical model of the factors impacting E-business implementation in Kenya. Firstly, the problem statement and objectives of the study are provided. A theoretical exposition of E-business and related concepts will be outlined. Thereafter, the research methodology of the study will be highlighted. The research results will be provided, followed by the main conclusions. Implications of implementing E-business in developing countries (such as Kenya) will also be indicated. The problem statement and objectives of the study will be highlighted in the next section.

PROBLEM STATEMENT AND RESEARCH OBJECTIVES

Kenya was linked to the Internet and World Wide Web in 1996 (Mutula, 2002:470). Since then, there has been significant growth in the Internet usage in Kenya. However, despite some notable developments in the usage of the Internet in Kenya, poor telecommunication service and an inadequate mains power supply structure is still hampering the growth of E-business in the country (ITU 2006). Computer hardware, a critical component of an Internet infrastructure, remains expensive, connectivity tariffs are still high and an Internet policy still need to be developed to oversee the implementation and regulation of the Internet industry in the country (Mutula 2001:158). The potential of contemporary Information Communication Technologies (ICTs) is to the present (2009) not yet implemented in Kenya, in spite of a significant expansion in usage via Internet cafés. It seems there are external factors that impact successful E-business implementation.

Several studies (Dubelaar, Sohal and Savic 2005:1254; Fillis *et al.* 2004a:84; Jones Beynon-Davies and Muir 2003:101; Michael and Andrew (2004:285) identify several internal barriers to E-business implementation amongst others such as lack of financial resources and high costs; lack of IT expertise; unready customers and/or business partners; lack of top management support; unwillingness to learn new skills; and lack of an IT skill-base. It seems that there are many internal factors that can impact successful E-business implementation.

This led us to the problem statement and principal research question on: *Which internal or external factors impact E-business implementation in Kenya?*

A number of research objectives were formulated to give effect to the problems statement. The primary objective of the study was to construct a hypothetical model for E-business implementation in Kenyan firms. The secondary objectives of the study included inter alia:

- To explore literature on E-business implementation and related concepts;

- To develop an appropriate research instrument to source primary data related to E-business implementation;
- To develop a model for E-business implementation;
- To outline the implications of E-business implementation in developing countries, such as Kenya.

THEORETICAL FRAMEWORK FOR E-BUSINESS IMPLEMENTATION

E-business as a concept

Peace, Weber, Hartzel and Nightingale (2002:42) define E-business as the complex fusion of business processes, business applications, and organisational structure necessary to create a high-performance business model. The underlying premise of this definition of E-business that will be used in the study is the ability to share information easily, using technologies such as the Internet, Electronic Data Interchange, and cellular technologies.

For ease of constructing the model for the factors impacting E-business implementation, the environments identified in Bosch, Tait and Venter (2006:43) in terms of the micro-, market and macro environment will be used as a framework.

Micro environmental variables impacting E-business implementation

The micro business environment represents all the interacting variables within the business that have a positive or negative effect on the establishment, survival, growth and goal achievement of business firms (Bosch *et al.* 2006:43).

a) Strategic intent

The ability of a firm to predict the usefulness of Internet technology in future business strategies is a key competency to E-business adoption (Fillis *et al.* 2004a:351). Furthermore, top management's positive attitude toward change (Wu, Mahajan and Balasubramanian 2003:429) and the existence of strategic insight among top management (Wymer and Regan 2005:440) significantly influences IT adoption decisions by business firms. A discrepancy between a firm's expectations and its actual performance can also trigger the innovation process (Rogers 1995).

b) Cost implications

Business firms that have the necessary resources including financial resources can successfully implement E-business activities (Peace *et al.* 2002:48; Stockdale and Standing 2006:385). The high initial set-up cost of ICT is regarded as a barrier to E-business implementation (Michael and Andrew 2004:286). Furthermore, although the cost of internet

connection has decreased and most businesses use e-mail, implementing E-business requires a substantial investment cost, as it includes additional hardware and software to enhance communication links, and ongoing expenses during usage (Iacovou, *et al.* 1995:465). The cost of implementing Electronic Data Interchange (EDI) versus the benefits to be received seems also an obstacle to E-business implementation (Iacovou *et al.* 1995; Jun and Cai, 2003:193). Furthermore, a substantial investment in time and training of employees is needed to become multi-skilled (Peace *et al.* 2002:48).

c) Size of firm

Nikolaeva (2006:372) argued that larger firms have more resources and power in negotiating favourable terms with trading partners. On the other hand, the agility and flexibility of small business firms may enable them to react quickly to new developments such as E-business innovations (Jeona, Han and Lee 2006:1915). Firm size was also recognised by Lal (2005:196) and Zhu and Kraemer (2005:68) as a common factor impacting technology diffusion and innovation. But, once a firm crossed the resources threshold and started doing business online, size may not matter anymore (Zhu, Kraemer, Xu and Dedrick 2004:43).

d) IT expertise

Michael and Andrew (2004:285) maintain that many firms lack the necessary skill-base to engage with the digital economy. Furthermore, firms are more likely to adopt innovation when technical expertise is available (Lin and Lee 2005:175). Firms with high levels of technical expertise can master the technical aspects of E-business and adopt E-business systems more easily (Xu, Zhu and Gibbs 2004:15). Employees' knowledge of applying Information Technology is an important for E-business implementation (Michael and Andrew 2004:285). Many SMEs lack the necessary IT skill base to engage with digital economy (Hunter, Burgess and Wenn 2005; Taylor and Murphy 2004:285).

e) E-business know-how

The presence of an e-manager in a firm is important when using e-technology (Martin and Matlay 2003:20) as E-business know-how is driven by executives' knowledge of online selling and procurement (Lin and Lee 2005:175; Zhu, Kraemer and Xu 2003:339).. Managers should be made aware of the benefits from E-business implementation (Fillis, Johansson and Wagner 2004b:355) and that they have the capacity to manage the processes (Mutula and Brakel 2007:240). Top executive management must have a good

working knowledge of the new technology including seeing and understanding the need for change, in other word E-business implementation (Wymer and Regan 2005:440).

f) Viability of E-business concept

Moore and Benbasat (1991:199) point out that innovation should reflect an adopter's needs. Management and other employees should be aware of the suitability of E-business adoption to their business firms (Nikolaeva 2006:384). Many firms consider ICT technologies not applicable to the products and services they offer e.g. perishable products or if involving the senses such as taste or smell (Michael and Andrew 2004:285). A service-oriented firm is more likely to adopt ICTs than manufacturing or retail-based firms because the E-business concept is more viable in respect of their processes (Lin and Lee 2005:199). Very small firms, on the other hand, used the Internet to obtain information, meaning they may use it to gain supply chain sourcing information, and for buying rather than for selling reasons (Levenburg and Dandridge 2000:81).

g) Entrepreneurial orientation

Firms with an entrepreneurial strategy and a more positive attitude towards the Internet are more likely to be first-movers in E-business (Levenburg, Magal and Kosalge 2006:73). Firms wishing to implement E-business processes should strive to build an organisational culture that supports and fosters innovative efforts (Chatterjee, Grewal and Sambamurthy 2002:71). The degree of entrepreneurial versus conservative thinking will also impact upon E-business implementation (Fillis *et al.* 2004a:185) as E-business adoption is often based on the owner's perception of its value (Peng, Trappey and Liu 2005:476). Entrepreneurial orientated firms constantly monitor their environment and competitors, and are driven by attempts to beat external benchmarks, actively seek opportunities, and are willing to take risks to find creative and innovative solutions to external challenges (Auger, Barnir and Gallagher 2003:144; Fillis *et al.* 2004a:185).

Market (task) environmental factors

The market environment, as a component of the external environment (task environment) comprises all those interacting variables in the market that have a positive or negative effect on the establishment, survival, growth and goal achievement of business firms (Bosch *et al.* 2006:43).

a) Trading partner readiness

For successful E-business implementation an agreement should be reach between the trading partners (suppliers and customers) on the trading terms and the basis of their

relationship (Iacovou *et al.* 1995:470; Jun and Cai 2003:193). Trading partners should understand why going the EDI route is preferable (Zhu *et al.* (2003:340). The level of E-business readiness also impacts the commitment to E-business implementation (Stockdale and Standing 2006:384). Firms should tie their IT architectures to supply chain management and logistics so as to create internal and external collaboration functionality (Mutula and Brakel 2007:242), since E-business is about integrating diverse applications and databases across multiple platforms (Power and Sohal 2002:205). If successfully implemented, E-business can lead to improved relations with trading partners (Jun and Cai 2003:193).

b) Competitive pressure

Global competitive forces largely drive E-business diffusion and multi-national corporations often force local businesses to adopt E-business processes to remain competitive (Roberts 2009:14). The firm's ability to imagine, create and dominate new opportunities is the real basis for competition (Wymbs 2000:470) and drives IT adoption (Zhu *et al.* 2003:340). Higher levels of IT use increase business competition (Hsu, Kraemer and Dunkle 2006:20). Increased competitor access to current markets and consumer access to competitor's products; and a lack of resources to compete effectively influences the firm's decision to implement E-business (Zhu *et al.* 2003:340). Business firms must manage continuous change such as continuous ICT progress in general, and E-business tools and practices in particular (Lin, Huang and Tseng 2007:92).

c) Web site functionality

Concerns over security remain a barrier to potential customers and users of E-business (Jun and Cai 2003:193; Jones *et al.* 2003:11; Singh 2004). The functionality of a website, such as perceived usefulness and convenience, website speed response, availability of relevant information and web site authentication (Tan, Chong, Lin and Eze 2008:239), has an important impact on the continued implementation of E-business by firms (Mithas, Ramasubbu, Krishnan and Fornell 2006:104). Poor delivery systems and lack of standardised payment methods in developing countries continue to be an obstacle to E-commerce (Karake-Shalhoub and Al Qasimi 2006). Web content should be developed in local languages to increase E-business activities, as many people in rural areas are not English literate (Stone 2003:347). Web design requires highly qualified expertise (Jain 2006:61), which may be especially lacking in developing countries (Riyad, Myfanwy and Abdel 2002:114).

Macro environmental factors

The macro business environment comprises all the interacting variables external to businesses and their markets that have a positive or negative effect on their establishment, survival, growth and goal achievement (Bosch *et al.* 2006:43).

a) IT infrastructure

The main requisite for E-business implementation is a website as it is an important medium to sell products directly to the customers or to convey informative information (Riyad *et al.* 2002:114) and require continuous maintenance (Chen *et al.* 2003:131). Lack of a fast and reliable Internet connectivity and the cost and reliability of telephone links are impediments to E-business implementation (Matthews 2007:819). The reliability of Internet accessibility (Mutula 2005:126), together with the range and quality of services offered by ISPs (Stockdale and Standing 2006:385) played a decisive role in E-business implementation. In addition, competent human resources are imperative in order to reap the benefits of ICT to its fullest potential (Jain 2006: 61).

b) Legal and regulatory environment

ICT requires a legal and regulatory framework (Jain 2006:60; Zhu and Kraemer 2005:68). Uncertainty about the legal, regulatory and tax environment can thus impact E-business implementation negatively (Hinson and Sorensen 2006:117). Legal disputes associated with Electronic Data Interchange (EDI) present potential challenges to business firms as EDI partners should agree on all terms and conditions, shipment location of scheduled delivery, duration of the contract, designation of who pays for network charges, and the obligations of sender and receiver, in case the document is intercepted by an unauthorised third party (Jun and Cai 2003:193). Regulatory support for E-business operations is needed for security, credit card use, and online transactions with parties that have no prior relationship (Zhu and Kraemer 2005:68). It must be noted that developed countries has a more conducive legal environment for conducting E-business (Hinson and Sorensen 2006:117).

c) International orientation

The growth of foreign trade or global markets has prompted E-business implementation (Ruzzier, Hisrich and Antoncic 2006:477). A firm's globalisation orientation can influence a firm's decision to implement E-business (Jeona, *et al.* 2006:1907) and be a driving force towards adopting new ICT based strategies and business practices (Hinson and Sorensen 2006:120; Lal 2005:185). With increased internationalisation of customers and markets, managers are concerned with developments in both domestic- and international markets as it creates both opportunities and competitive challenges for firms seeking profitable growth

(Ruzzier *et al.* 2006:477). If firms expand globally, they tend to have a greater incentive to use E-business to leverage their existing IT capabilities for competitive advantage (Xu *et al.* 2004:16). The level of globalisation influence a firm's use of E-business because the Internet can be used to gain global visibility across an extended network of trading partners and respond quickly to a range of business conditions, from changes in customer demand to resource shortages (Hsu *et al.* 2006:18). The main factors influencing internationalisation of firms are firm size (sales turnover), competitive advantage and market characteristics (Javalgi, Griffith and White 2003:188) where competitive advantage is directly influenced by management's attitude towards global expansion.

E-business implementation outcomes

E-business processes result in increased accuracy, flexibility and uniformity, making business operations more competitive by increasing productivity, decreasing costs and leading to increased market share (Singh 2004:4). Iacovou *et al.* (1995:467) identified the perceived direct benefits of E-business implementation as reduced transaction costs; improved cash flow; reduced inventory levels; and higher information quality. E-business also promotes a better image for the business firm (Singh 2004:4). Indirect benefits to E-business implementation are increased operational efficiency; improved customer service; improved trading partner relationships; and an increased ability to compete (Iacovou *et al.* 1995:467).

The next section will present the hypotheses for the research in question.

HYPOTHESIS

The following null-hypotheses were phrased based on the literature review.

Micro environmental variables:

- H_{1.1}: There is a relationship between *strategic intent* and *E-business implementation*.
- H_{1.2}: There is a relationship between *cost implications* and *E-business implementation*.
- H_{1.3}: There is a relationship between *size of firm* and *E-business implementation*.
- H_{1.4}: There is a relationship between *IT expertise* and *E-business implementation*.
- H_{1.5}: There is a relationship between *E-business know-how* and *E-business implementation*.
- H_{1.6}: There is a relationship between *viability of E-business concept* and *E-business implementation*.

H_{1.7}: There is a relationship between *entrepreneurial orientation* and *E-business implementation*.

Market environmental variables:

H_{2.1}: There is a relationship between *trading partner readiness* and *E-business implementation*.

H_{2.2}: There is a relationship between *competitive pressure* and *E-business implementation*.

H_{2.3}: There is a relationship between *web site functionality* and *E-business implementation*.

Macro environmental variables:

H_{3.1}: There is a relationship between *IT infrastructure* and *E-business implementation*.

H_{3.2}: There is a relationship between *legal and regulatory environment* and *E-business implementation*.

H_{3.3}: There is a relationship between *degree of international orientation* and *E-business implementation*.

Table 1 shows the statements that were linked to the above three sets of hypotheses.

TABLE 1
STATEMENTS LINKED TO THE THREE SETS OF HYPOTHESES

Micro environmental variables	Statements	
Strategic intent	1	Our business needed specific E-business implementation strategies
	2	Our business has gained strategic benefits by implementing E-business
	3	E-Business implementation has created more value for our customers
	4	E-Business implementation has created more value for our suppliers
	5	E-business implementation has required the appointment of a champion to drive it
	6	E-business implementation has necessitated high initial start-up costs

Cost implications	7	E-business implementation has resulted in exceeding our budget for ongoing cost e.g. connection costs
	8	E-business implementation has lead to exceeding our budget for indirect costs e.g. management time
	9	E-business implementation has resulted in exceeding our budget for maintenance costs of the E-business processes
	10	E-business implementation has caused at times costs of outside expertise e.g. consultancy
Size of firm	11	E-business implementation has been warranted by our business's sales volume
	12	E-business implementation has enabled our business to achieve economies of scale
	13	The financial capacity of our business to attract credit facilities has eased E-business implementation
	14	The ability of our business to bear risks has aided in the implementation of E-business
	15	E-business has increased our business's market share
IT expertise	16	E-business implementation has required that our staff have adequate IT knowledge levels
	17	To implement E-business competent IT expertise within Kenya was needed
	18	E-business implementation has necessitated our business to employ more staff with IT expertise
	19	E-business implementation has compelled our business to send staff for E-business processes training
	20	E-business implementation has necessitated our business to educate staff on IT related technology
E-business know-how	21	Our business's managers have been aware of all the benefits of E-business implementation
	22	E-business implementation has required that our managers have the capacity to manage E-business processes
	23	Implementation of E-business models has required support of our managers
	24	E-business implementation has required that our managers have prior implementation experience

	25	E-business implementation has required that some staff within our business have ICT expertise
Viability of E-business concept	26	The suitability of our business's product range has necessitated E-business implementation
	27	E-business implementation has been warranted by the complexity of our business's transactions
	28	The perceived effectiveness of E-business transactions has necessitated E-business implementation by our business
	29	The perceived ease of conducting E-business has necessitated implementation by our business
	30	E-business implementation has required compatibility with our existing business technology
Entrepreneurial orientation	31	E-business implementation has required enthusiasm of our managers to embrace new technologies
	32	E-business implementation has required a positive attitude of our staff towards change
	33	E-business implementation has required a positive attitude of ICT technicians towards our staff
	34	E-business implementation has required our managers' willingness to take risks
	35	The ability of our business to identify new business strategies has aided in E-business implementation
Market environmental variables	Statements	
Trading partner readiness	36	E-business implementation has required that our suppliers have E-business capacity
	37	E-business implementation has required that our customers have E-business capacity
	38	E-business implementation has necessitated that our business have online access to trading partners' inventory levels
	39	E-business implementation has led to reduced inventory ordering costs
	40	E-business implementation has led to improved relations with our trading partners

Competitive pressure	41	E-business implementation has been necessitated by the intensity of business competition
	42	The implementation status of our business competitors has influenced the decision of our business to implement E-business
	43	E-business implementation by our business has been occasioned by the successful implementation within the industry
	44	E-business implementation has required E-business acceptance by our customers
	45	The desire to achieve competitive advantage has necessitated E-business implementation
Web site functionality	46	E-business implementation has required an adequate speed of our business's website response
	47	Our business's website needed to have time-related information for successful E-business implementation
	48	Successful E-business implementation has required our business to ensure that transactions via its website are secure
	49	E-business implementation required that relevant information appear on our business's website
	50	E-business implementation has required the authentication of our business's website
Macro environmental variables	Statements	
IT infrastructure	51	E-business implementation has required the availability of Internet services
	52	The affordability of Internet services has warranted E-business implementation
	53	The reliability of Internet accessibility was a requirement for E-business implementation
	54	The quality of services offered by Internet Service Providers have made E-business implementation easier
	55	The range of services offered by Internet Service Providers (e.g. higher band width) have prompted E-business implementation
	56	The existence of legal framework offering protection of Internet transactions has encouraged E-business implementation

Legal and regulatory environment	57	The existence of ICT protocols have warranted E-business implementation
	58	Positive taxation implications on Internet transactions have prompted our business's decision to implement E-business
	59	Favourable government regulations on Internet trading have lead to E-business implementation by our business
	60	E-business incentives provided by government have justified E-business implementation by our business
International orientation	61	E-business implementation by our business have been necessitated by the growth of foreign trade
	62	The possibility of growth of global markets has encouraged our business to implement E-business
	63	My business has implemented E-business to establish international business relationships
	64	The cultural diversity of our business has prompted E-business implementation
	65	Global barriers to entry faced by our business has prompted E-business implementation
E-business implementation outcomes	66	E-business implementation led to an increase in our ability to compete
	67	E-business implementation will resulted in increasing our market share
	68	E-business implementation effected an increase in our operational efficiency
	69	E-business implementation resulted into improved customer service levels
	70	E-business implementation created cost efficiency benefits for our business

RESEARCH METHODOLOGY

The purpose of the study was to construct a hypothetical model for E-business implementation in Kenyan firms.

The research approach

Due to the nature of this project, an investigation of variables impacting on E-business implementation, the quantitative research approach was adopted. Further, because the

research variables were pre-specified based on secondary sources, confirmative factor analysis were employed.

The sample

The relevant population of the research in question was registered business firms operating in Kenya which is estimated to be 10 000 business firms. The non-probability sampling procedure was used and a convenient sample was drawn, purely on the basis of availability and accessibility of the respondents. Registered firms in Kenya that appear in the 2009 edition of the official yellow pages directory and the 2009 members' directory of Kenya Association of Manufacturers comprised the sample. The only requirement for inclusion in the sample is that the business firm must have implemented E-business practices. As it could not beforehand be established whether these business firms had implemented E-business, it was clearly stated in a covering letter that only business firms that have implemented E-business are allowed to participate. Only 2550 business firms were invited to participant in the research project via e-mail as the name of a specific person could be lined to the e-mail address. The position of the person that completed the questionnaire could thus be verified and it could be established whether this person was indeed knowledgeable about E-business.

Research instrument

A structured text-based research instrument was designed and the respondents were requested to rate the statements pertaining to E-business implementation on a five-point Likert scale anchored from strongly agree (5) to strongly disagree (1). A five point Likert scale was used given the educational levels of the respondents. Biographic information on the responding business firms was also solicited. The research instrument was pilot tested to assess the initial validity and reliability. The research instrument comprises of two sections:

- Section A gauged the opinions of respondents on the factors impacting E-business implementation.
- Section B canvassed biographical data of the business firms.

Data collection

For the data collection phase, the Internet based survey tool known as the "my web-survey" was used for the study. A total of 2 550 emails were sent to business firms requesting them to access the Internet based questionnaire through the link, "My web survey". Of all the responses, after data cleaning, there were 362 *usable* questionnaires.

Data analysis

The data analysis comprised of two phases, namely:

- Cronbach alpha reliability coefficients to verify the consistency of the inter-item reliability of the research instrument, and
- Confirmatory factor analysis to assess the discriminant validity of the measuring instrument. Items that did not load to a significant extent (loadings ≥ 0.30) and on a unique factor were deleted. After insignificant loadings (loadings < 0.30) were deleted, the confirmatory factor analysis was again repeated to assess the discriminant validity of the measuring instrument. Confirmatory factor analysis was used as the factors identified were identified in previous research studies.

Furthermore, validity was further enhanced by: ensuring that the overall research design of the study was sound; the most relevant research procedures were adopted; appropriate samples were drawn; and suitable statistical procedures were followed.

EMPIRICAL RESULTS

Results of the demographic data

Table 2 is a composite table reflecting on the demographical data.

TABLE 2
DEMOGRAPHIC DATA

Form of business	%	Nature of products/Services	%
Sole proprietors	21	Building, construction and mining	5.6
Partnerships	16	Chemicals and Allied	5.0
Private companies	55	Energy, electrical and electronics	4.7
Public companies	8	Food and beverages	8.6
Branch of business industry	%	Metal and Allied	1.1
Retail	12	Transport and Allied	7.0
Wholesale	13	Motor vehicle and accessories	6.7
Manufacturing	9	Paper and paper board	4.2
Service	65	Pharmaceutical and medical equipment	3.6
Other	1	Plastic and rubber	1.4
Number of employees	%	Textile and apparels	3.1
1-9	43	Timber, wood and furniture	5.3
10-49	35	ICT	21.7

50-250	11	Financial and Allied	5.8
250+	11	Consultancy	15.3
Total value of capital assets (Kenyan shillings)	%	Other	0.8
100-200m	28	Business market focus	%
200-300	27	National	69
300-400	12	International	31
400-500m	9		
Over 500m	24		

As can be seen in Table 2, most respondents were private companies, service businesses, selling a variety of products or services, with less than 50 employees and having a national market focus.

Results of the reliability and validity of the factors

Reliability

Item No.	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
1	0.488						
2	0.778						
3	0.703						
4	0.563						
5	0.384						
6		0.606					
7		0.931					
8		0.943					
9		0.906					
10		0.826					
11			0.791				
12			0.663				
13			0.509				
14			0.650				
15			0.755				

16				0.640			
17				0.602			
18				0.548			
19				0.683			
20				0.716			
21					0.507		
22					0.648		
23					0.533		
24					0.092		
25					0.303		
26						0.322	
27						0.026	
28						0.577	
29						0.574	
30						0.482	
31							0.558
32							0.729
33							0.825
34							0.328
35							0.094
Cronbach Alpha	0.718	0.923	0.804	0.774	0.462	0.403	0.612
Item Number	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13	Factor 14

Table 3 shows the confirmatory factor matrix for E-business implementation in Kenya.

TABLE 3
CONFIRMATORY FACTOR ANALYSIS MATRIX

36	0.523						
37	0.366						
38	0.219						
39	0.157						
40	0.518						
41		0.604					
42		0.695					
43		0.659					
44		0.483					
45		0.423					
46			0.505				
47			0.599				
48			0.653				
49			0.813				
50			0.648				
51				0.153			
52				0.481			
53				0.465			
54				0.780			
55				0.781			
56					1.000		
57					0.191		
58					0.074		
59					0.112		
60					0.065		
61						0.600	
62						0.729	
63						0.730	
64						- 0.034	
65						0.073	
66							0.383
67							0.477
68							0.414
69							0.609
70							0.626

Cronbach Alpha	0.436	0.705	0.774	0.686	0.355	0.484	0.618
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Given that the analysis was based on 362 questionnaires, 0.30 was accepted as the minimum cut-off level for statistical analysis. All the items with pattern coefficients less than 0.30 were eliminated. According to Hair, Anderson, Tatham and Black (2006:137), the generally agreed lower limit for Cronbach alpha reliability pattern coefficients is 0.70 although it may decrease to 0.60 for confirmatory factor analysis. Athayde (2003:10) however, is of the view that a threshold of 0.50 is permissible and alludes to the unresolved debate about what constitutes an acceptable alpha. As only one item (item 56) loaded in factor 12, namely legal and regulatory environment, after eliminating the factor loadings less than 0.30, it was decided to eliminate factor 12 in totality. Furthermore, item 56 shows convergent validity. The first confirmatory factor loadings with excluded items and new Cronbach alpha values are shown in Table 4.

TABLE 4
ADJUSTED CRONBACH'S ALPHA VALUES

Item numbers	Factor	Initial Cronbach alpha values	Excluded items	New Cronbach
1-5	Strategic intent	0.718		0.718
6-10	Cost implications	0.923		0.923
11-15	Size of firm	0.804		0.804
16-20	IT expertise	0.774		0.774
21-25	E-business know-how	0.462	24	0.572
26-30	Viability of E-business concept	0.403	27	0.538
31-35	Entrepreneurial orientation	0.612	35	0.691
36-40	Trading partner readiness	0.436	38, 39	0.479
41-45	Competitive pressure	0.705		0.705
46-50	Web site functionality	0.774		0.774
51-55	IT infrastructure	0.686	51	0.724
56-60	Legal and regulatory	0.355	56, 57, 58, 59,	Deleted in
61-65	International orientation	0.484	64, 65	0.718
66-70	E-business implementation	0.618		0.618

The Cronbach alphas of trading partner readiness and legal and regulatory environment are 0.479 and 0.355 respectively and seem to violate the reliability of the instrument given the threshold of 0.50 according to Athayde (2003:10). The 0.479 coefficient for trading partner readiness was retained as it can be rounded to 0.50. Based on the permissible threshold stated by Athayde (2003:10), the reliability of the factors in the research instrument can be described as acceptable.

Validity

With regard to the validity of the research instrument, the pattern coefficients after deleting the pattern coefficients less than 0.30 demonstrated loadings ranging between 0.303 and 0.943 signalling acceptable levels of inter-correlation between the items and identified factors and therefore confirm the validity of this scale to assess E-business implementation for Kenyan firms. In the next section the interpretation of the findings of the reliability and validity of the identified factors will be presented.

CONCLUSIONS

The conclusions of the demographic data will be first presented.

Conclusions on the demographic data

The data showed that more than half of the 362 respondents were sole proprietors, in the service industry with as many as 35% employing between 10 to 49 employees (can be regarded as small businesses). Most of the respondents in the sample of 362 were operating in the ICT sector (21.7%) followed by consultancy (15.3%) and food and beverages (8.6%). The majority of the participating firms had less than 100 million Kenyan shillings worth of capital assets with only 8% of the sample indicating assets over 500 million Kenyan shillings.

Conclusions on the identified factors

With reference to Tables 3, the interpretation of reliability and validity of the identified factors are outlined below.

a) Factor one: Strategic intent

All five pre-specified items associated with *strategic intent* recorded anticipated pattern coefficients ranging between 0.384 and 0.778. This factor has a Cronbach alpha reliability coefficient of 0.718, which indicates an acceptable level of reliability.

b) Factor two: Cost implications

The five pre-specified items loaded on the factor *cost implications*. The pattern coefficients reflect loadings between 0.606 and 0.943. This factor has a Cronbach alpha reliability coefficient of 0.923, indicating a high level of reliability.

c) Factor three: Size of firm

The five pre-specified items measuring the variable *size of firm* have indicated pattern coefficients of between 0.509 and 0.791. The Cronbach alpha reliability coefficient is 0.804,

indicating a high level of reliability.

d) Factor four: IT expertise

The five pre-specified items pertaining to *IT expertise* recorded pattern coefficients between 0.502 and 0.716. The Cronbach alpha reliability coefficient for this scale is 0.774, indicating an acceptable level of reliability.

e) Factor five: E-business know-how

Only four of the five pre-specified items of this scale loaded on the factor *E-business know-how* with pattern coefficients between 0.303 and 0.648. The Cronbach alpha reliability for this scale is 0.572 (≈ 0.60), which can be regarded as an acceptable level for the reliability.

f) Factor six: Viability of E-business concept

Four of the five pre-specified items pertaining to *viability of E-business concept* have shown pattern coefficients of between 0.322 and 0.577 after deleting the item with a pattern coefficient of 0.30. A Cronbach alpha reliability coefficient of 0.538 was demonstrated. Based on the views of Althayde, the factor was retained.

g) Factor seven: Entrepreneurial orientation

Four of the pre-specified items pertaining to *entrepreneurial orientation* showed pattern loadings of between 0.328 and 0.825, which are above the cut-off point of 0.30. As shown in Table 7.4 item 35 was deleted for the purpose of further analysis. This resulted in an improved Cronbach alpha reliability coefficient of 0.691, which is regarded as an acceptable level of reliability.

h) Factor eight: Trading partner readiness

Of the five pre-specified items in the research instrument detailed to measure the variable *trading partner readiness*, only three have loaded with pattern coefficients ranging between 0.366 and 0.523. The pattern coefficients of the other two items (38 and 39) were below the recommended cut-off point of 0.30. The Cronbach alpha reliability coefficient of this scale after eliminating items 38 and 39 is 0.479, which is close to the recommended threshold of 0.50 advocated by Athayde, and therefore this factor was retained.

i) Factor nine: Competitive pressure

The pattern coefficients of the five items of this scale range between 0.423 and 0.695. The Cronbach alpha reliability coefficient of this scale is 0.705, which is regarded as an acceptable level of reliability.

j) Factor ten: Website functionality

The five pre-specified items of *website functionality* loaded as anticipated with pattern coefficients between 0.505 and 0.813, indicating levels of convergent validity. The Cronbach alpha reliability coefficient of this scale is 0.774 and is therefore viewed as an acceptable level of reliability.

k) Factor eleven: IT infrastructure

Four out of the five pre-specified items pertaining to *IT infrastructure* loaded and reflected pattern coefficients of between 0.465 and 0.781. Item 51 did not load and was excluded from the scale. The Cronbach alpha reliability coefficient of this scale was improved to 0.724, after omitting item 51, which is considered as an acceptable level of reliability.

l) Factor twelve: Legal and regulatory framework

Only one of the pre-specified five items in the research instrument designed to measure the variable *legal and regulatory framework* obtained a pattern coefficient of more than 0.30. This finding demonstrates a lack of evidence of convergent validity of all other items smaller than 0.30. Moreover, the scale returned a low Cronbach alpha reliability coefficient of 0.355, which is regarded as unacceptable. Consequently the scale was excluded from further analysis.

m) Factor thirteen: International orientation

Only three of the pre-specified items pertaining to *international orientation* loaded with pattern coefficients ranging from 0.600 to 0.730. Two items failed to load, namely items 64 and 65 (see Table 7.5). The adjusted Cronbach alpha reliability coefficient, after omitting the two items, is 0.718, which is acceptable. The scale has been retained with the three items.

n) Factor fourteen: Implementation outcomes

All the five pre-specified items of *implementation outcomes* loaded with pattern coefficients between 0.383 and 0.626. With a Cronbach alpha reliability coefficient of 0.618, this scale demonstrates an acceptable level of reliability.

In the next section the limitations of the study and suggestions for future research are given.

LIMITATIONS AND FUTURE RESEARCH

Though the findings are based upon extensive empirical investigation, it should not be seen to offer conclusive findings as it focused on E-business implementation, which constantly changes due to technological advances in a dynamic business environment. All survey

responses were from managers engaged in E-business. While the executive management team could gauge the perceptions within the firm, the study has to contend with the fact that bias may have inflated the magnitudes of the observed linear effects. Most of the theories on E-business reviewed by this study, and used to build the hypotheses for the research were based on E-business technology adoption in developed countries.

Suggestions for future research could include:

- To test the model using Structured Equation Modelling; and
- To explore the differences and similarities of factors impacting E-business implementation between a developed country and a developing country.

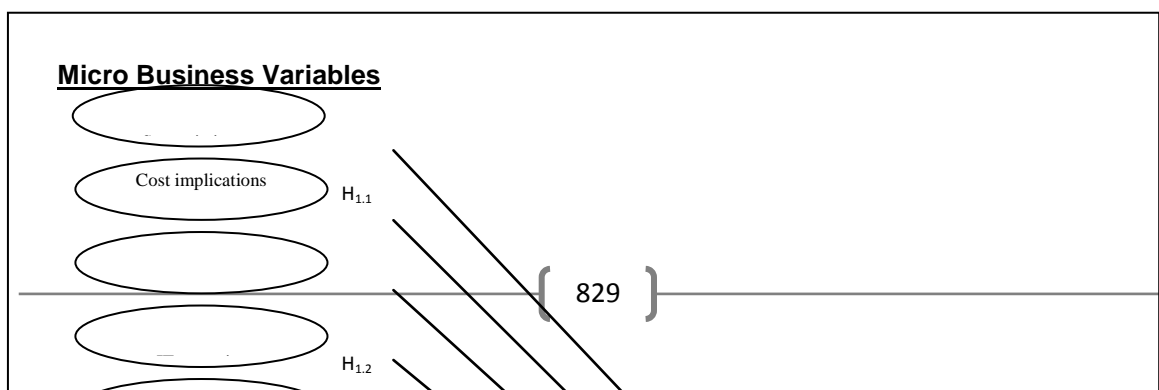
In the next section some implication regarding E-business implementation in Kenya will be given.

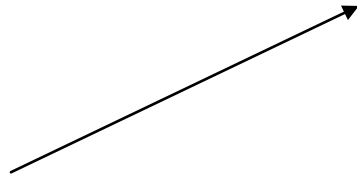
IMPLICATIONS OF FINDINGS ON E-BUSINESS IMPLEMENTATION IN KENYA

The importance of E-business implementation in Kenyan firms cannot be underestimated as if not doing so it will prevent business firms from being able to compete globally. As developed and developing countries differ in terms of the level of IT use and the factors shaping the use thereof, it may explain why some of the items in the measurement instrument had unacceptable reliability coefficients of less than the 0.30. As the government in Kenya has yet to formulate appropriate ITC policies for E-business implementation (ITU 2006) it could explain why the legal and regulatory environment was not deemed a factor impacting E-business implementation in Kenya yet.

The value of this study lies in the fact that a hypothetical model was developed that could be used to establish which factors indeed impact E-business implementation in developing countries such as Kenya. Most other studies (Iacovou *et al.* 1995:467; Fillis *et al.* 2004a:184) are based on E-business implementation in developed countries. It must be noted that the purpose of this paper was not to test the hypothetical model but merely to develop a reliable and valid hypothetical model for E-business implementation in developing countries. The hypothetical model of E-business implementation is shown in Figure 1.

FIGURE 1
HYPOTHETICAL MODEL OF E-BUSINESS IMPLEMENTATION





Finally, the findings of this study tend to suggest that assumptions, approaches and strategies defined for successful E-business implementation and the realisation of its benefits in developed economies may not be readily applicable or transferable to developing countries contexts. The factors traditionally considered as influencing E-business implementation might be largely beyond developing countries E-business level of adoption.

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ATTITUDES OF SOUTH AFRICAN AND UNITED STATES STUDENTS TOWARDS MARKETING PRACTICES: A COUNTRY-OF-ORIGIN (COO) PERSPECTIVE

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ABSTRACT

To increase market share, revenue and profit, businesses are increasingly marketing their products outside their traditional domestic markets by targeting foreign markets. It therefore becomes essential that marketers entering international markets gain an understanding of consumer decision-making and consumer attitudes in particular as consumer attitudes influence purchase and consumption decisions. This paper compares the *attitudes* of South African and American students towards the *marketing practices* of products they perceive to originate from their respective home markets, a developing market as well as a developed market. A census was conducted of students following a marketing module at a South

African and a United States university. A demographic profile of respondents from each of the respective countries is provided as well as findings in terms of the attitudes measured and hypotheses formulated for the study. The study found significant differences in respondents' attitude towards marketing practices based upon where they perceive a product to originate from.

INTRODUCTION

Businesses are expanding their operations to foreign markets as they seek opportunities to increase market share, revenue and profit. This has led to most major businesses marketing their products beyond their original domestic borders (Schiffman and Kanuk, 2007). In fact, the issue for businesses is not *whether* to expand to global markets, but rather *how* to expand (Schiffman and Kanuk, 2007). Mueller, Palmer, Mack and McMullan (2003) and Klein, Ettenson and Morris (1998) add by stating that the opportunities for marketers of consumer goods and services to enter international markets have never been greater. This emphasises the need for businesses competing in international markets to gain a proper understanding of the constructs that influence consumer choices in order to position their products and services in the best possible way to successfully compete in the international arena.

With increasing globalisation it has become essential that international marketers understand the effect of country-of-origin (COO) (Zbib, Wooldridge, Ahmed and Benlian, 2010) as one possible construct that could influence consumer purchasing decisions (Veale and Quester, 2009). A failure to do so may result in incorrectly deploying marketing strategies, thereby resulting in the wasting of valuable resources (Veale and Quester, 2009). Roth and Diamantopoulos (2009) support this view by explaining that an understanding of COO as possible influence on consumer behaviour is important as a favourable opinion of the COO has a significant impact on consumers' evaluation of products and their buying decisions. When determining consumers' view or opinion of a product's COO, marketers are in fact trying to determine their attitudes towards the product (Blackwell, Miniard and Engel, 2006). It is therefore essential that marketers who consider expanding their products to foreign markets not only understand consumer decision-making, but also their attitudes towards COO as these attitudes represent consumers' overall view of the product (Peter and Olson, 2008). Blackwell *et al.* (2006) support the necessity of studying consumer attitudes, as attitudes influence consumers' purchase and consumption intentions.

The purpose of this paper is to compare the attitudes of South African (SA) and United States (US) students towards the marketing practices of products they perceive to originate

from their respective home markets (i.e. South Africa and the United States), a developing market, namely China, as well as a developed market, namely the United Kingdom (UK).

LITERATURE REVIEW

The literature review of this paper focuses on a discussion on the consumer decision-making process, consumer attitude, the COO effect and its role in consumer decision-making. The last part of the literature review addresses the influence of the COO effect on consumer attitudes. The hypotheses formulated for this study flow from this section and are also presented here.

The consumer decision-making process

Hoyer and MacInnis (2008) explain that the study of consumer behaviour, and the consumer decision-making process in particular, provides critical information to marketing managers for developing marketing strategies, thereby emphasising the importance of understanding consumer decision-making. It is generally accepted that the consumer decision-making process comprises five stages, namely problem recognition, search for information, alternative evaluation, purchase and post-purchase evaluation (Hawkins and Mothersbaugh, 2010; Hoyer and MacInnis, 2008; Peter and Olson, 2008; Schiffman and Kanuk, 2007; Blackwell, Miniard and Engel, 2006; Solomon, 2004). Each of the stages in the process is influenced by a number of external and internal influences, either individually or combined. External influences affecting the decision-making process, include culture, demographics, social class, reference group, family as well as situational influences (Hawkins and Mothersbaugh, 2010; Hoyer and MacInnis, 2008; Schiffman and Kanuk, 2007; Blackwell, Miniard and Engel, 2006). Internal influences that could affect the decision-making process, include the consumer's memory, perception, learning, motives, personality, values and lifestyle, emotions and attitudes (Hawkins and Mothersbaugh, 2010; Schiffman and Kanuk, 2007; Blackwell, Miniard and Engel, 2006). This study deals with consumer attitudes towards COO and therefore, this internal influence on consumer decision-making is elaborated on.

Consumer attitude

Wright (2006) explains that consumers are not born with an attitude. Attitudes, by definition, are feelings and beliefs that people develop about objects, events, people, and issues over a lifetime through learning and interacting with others (Wright, 2006). An attitude can therefore be viewed as the way a person thinks, feels and acts towards something (Hawkins and Mothersbaugh, 2010), or more simplistically: a person's overall evaluation of an object such as a product (Peter and Olson, 2008). Despite different views regarding the formation and functioning of attitudes, most researchers agree that attitude comprises three components,

namely an affective, behavioural and cognitive component – also known as the ABC model of attitudes (Hawkins and Mothersbaugh, 2010; Hoyer and MacInnis, 2008; Wright, 2006; Solomon, 2004). The cognitive component refers to a consumer's beliefs towards something (e.g. consumers hold a belief about a product based on information provided by friends, family or the media), the affective component relates to the way the consumer feels (or their emotions) about something, while the behavioural component relates to the consumer's intention to do something with regard to an object based on their beliefs and emotions towards it (Hawkins and Mothersbaugh, 2010; Hoyer and MacInnis, 2008; Wright, 2006; Solomon, 2004). These three components constantly interact and will come together to influence the products consumers purchase (Wright, 2006).

Although the three attitude components are consistent (Hawkins and Mothersbaugh, 2010), marketers can use a number of strategies to influence consumers' attitudes (Hawkins and Mothersbaugh, 2010; Hoyer and MacInnis, 2008; Peter and Olson, 2008), including changing beliefs by, for example, providing positive marketing information; shifting the importance of beliefs by convincing consumers that certain product attributes are more important than others; adding new beliefs that would make consumers' attitudes more positive; and changing the perception of what the ideal brand is.

Blythe (2008) cautions that marketers should be careful to associate a positive attitude towards a product with a positive attitude about purchasing the product, as a consumer may prefer a certain product (for example cars manufactured in China), but will not buy it (due to, for example, fears of reference group opinions). Despite this caution, Schiffman and Kanuk (2007) and Wright (2006) express the opinion that marketing plays a major part in the process to change people's attitudes as consumer attitudes can be strongly influenced by mass media, direct marketing campaigns and the Internet. Wright (2006) elaborates by stating that marketing and marketing communications in particular form an essential part of influencing, building and maintaining positive consumer attitudes towards a business' products. Based on this knowledge, marketers bombard their target markets with information in an attempt to persuade consumers to buy new products change from a competing product or choosing a particular retailer instead of others (Wright, 2006).

COO effect and the consumer decision-making process

According to Kim (2006), the COO effect can be referred to as the country or market (hereafter referred to as market) where consumers think a product originates from. COO effect acts as an extrinsic cue and is considered together with other extrinsic and intrinsic cues when a product selection is being made (Batra, Ramaswamy, Alden, Steenkamp and

Ramachander, 2000) or when perceiving advertising claims (Han, Yoon and Vargas, 2005). Arpan and Sun (2006) argue that COO cues serve as stereotypes or judgement shortcuts when consumers consider their attitude towards a product, an organisation or its behaviour. Researchers furthermore uncovered that COO is relevant in both high and low level decision-making situations (Peterson and Jolibert, 1995; Ahmed, Johnson, Yang, Fatt, Teng and Boon, 2004; Khan and Bamber, 2007). COO effects have been found to vary between product type, consumer types, availability of alternative cues to the consumer (Ryu, Park and Feick, 2006; Papadopoulos, 1993) or culture-specific factors (see Han, Yoon and Vargas, 2005). Hsieh (2004) found brand and national variations in the magnitude of COO effects. COO effects were observed in single-cue and multiple-cue product stimuli studies, within-subject and between-subject experimental designs and different samples the world over (Liu and Johnson, 2005).

Gurhan-Canli and Maheswaran (2000), however, found that COO perceptions play a more important role with low motivation products, while with high motivation products consumers effortful consider product attributes. In a similar vein, Chiou (2003) found that COO influenced the post-trial affective and cognitive attitude of consumers differently under different levels of consumer expertise and product ambiguity. For unambiguous products, a positive COO significantly improves novice consumers' cognitive and affective attitudes, whereas for expert consumers it had no effect. For ambiguous products, a positive COO significantly improves novice consumers' cognitive and affective attitudes as well as expert consumers' affective attitudes. Expert consumers' cognitive attitudes are, however, not affected.

Researchers measure the COO construct among respondents by referring to "*Made in*" a particular country (Peterson and Jolibert, 1995). This issue could become rather complex, since large numbers of products are manufactured and assembled in a number of different markets. Many researchers differentiate thus between country of design (COD) and country of assembly (COA) (Ahmed and d'Astous, 2004). Patara and Monroe (2009) found with regard to this hybrid-level COO that an increase in the hybrid-level proportion of a country with a strong COO will result in an increase in the perception of quality, value and willingness to buy of the hybrid product. However, this study, as numerous others, does not consider hybrid-level COO, but operationalises COO as "Made in one specific country".

It is important for an international marketer to determine whether the COO towards a country among consumers in a particular market is positive or negative (Ahmed, Johnson, Ling, Fang and Hui, 2002). When a positive COO image exists, the international marketer could

focus on this aspect to create a positive attitude and image towards the product itself (Ahmed, Johnson, Ling, Fang and Hui, 2002). Even when a product has weaknesses, it could benefit from a favourable COO product image (Ahmed, Johnson, Ling, Fang and Hui, 2002). Mohamad, Ahmed, Honeycutt and Hyder Tyebkhan (2000) recommend that for products associated with positive COO images, international marketers can emphasise the COO characteristic of the product, charge a premium price, distribute exclusively and promote more through a nation sponsored country image. For products associated with negative COO images, international marketers should rather emphasise the brand name, charge lower prices to attract value conscious customers, place distribution emphasis on supply chain partners and promote through a manufacturer sponsored brand image. The following section sheds light on the influence of COO on consumer attitudes and present the hypotheses formulated for this study.

COO effect and consumer attitude

As stated earlier, the COO image that consumers hold of a particular market may influence their decision-making process (Yasin, Noor and Mohamad, 2007). Ethnocentrism versus patriotism is furthermore seen as a major influence on decision-making in developed and developing countries (Wang and Chen, 2004).

The issue of ethnocentrism in a developed market is illustrated by Chao, Wuhrer and Werani (2005). Austrian consumers were asked about their purchase intention of an electronics product on a 2 x 2 x 2 matrix. The fictitious product was presented by a USA celebrity spokesperson (also regarded as a celebrity in Austria) as opposed to a German/Austrian non-celebrity spokesperson, under a German-sounding brand name as opposed to an English-sounding brand name and under a "Made in Germany" COO label as opposed to a "Made in China" COO label. Customers indicated that neither a USA celebrity nor a German brand name can circumvent a poorly perceived COO stereotype (China). Furthermore, the German brand name outperformed the English brand name and the German/Austrian non-celebrity spokesperson outperformed the USA celebrity spokesperson. However, as far as consumer attitudes are concerned, it was found that COO does not impact consumer attitudes directly, but rather indirectly through consumer beliefs (Chao, Wuhrer and Werani, 2005). Han *et al.* (2005) elaborate on this by indicating that the overall negative COO image of a market does not influence the cognitive component of attitude, but does influence the affective and behavioural components of attitude.

COO attitudes are so pervasive that Liu and Johnson (2005) found COO effects to occur automatically in consumers' product evaluations without consumers' intention or control.

Even in situations where consumers have enough alternative information available to form unbiased judgements, COO cues automatically activated COO stereotypes that produced both facilitative (positive COO attitudes) and interfering effects (negative COO attitudes) on brand judgements.

Hsieh's (2004) investigation into the automobile industry furthermore revealed that consumer attitudes display stronger preferences for countries in the same geographic region. It was found that consumers from European countries such as the UK, Germany, Italy, Belgium, the Netherlands and Spain showed stronger acceptance of automobiles from European origin, consumers from Asian countries like China, India, Taiwan and Japan favoured Japanese automobiles and consumers from the USA and Canada preferred automobiles with a USA origin (Hsieh, 2004). Wang and Chen (2004) found furthermore that patriotism plays an important role when consumers in developed as well as developing markets consider which products they should purchase. Chryssochoidis, Krystallis and Perreas (2007) state that consumers typically view products from their home market more positively than products from other markets. It can therefore be deduced that consumers could therefore have more positive attitudes to the marketing practices of products they perceive to be from their home markets than those from foreign markets. Therefore, the following hypothesis can be formulated for the study:

- H1: SA and US respondents have a significantly more positive attitude towards the marketing practices of products they perceive to be from their respective home markets than those from other markets.

Ahmed and d'Astous (2004), Sohail (2005) as well as Solomon, Bamossy, Askegaard and Hogg (2006) found that consumers are more positive towards products they perceive to be from their home market as opposed to products they perceive to be from other markets. They also view products they perceive to originate from a developing market in a less positive way than products they perceive to be from a developed market. Furthermore, developing the COO difference between developed and developing countries, Batra *et al.* (2000) found that consistent with studies in cultural anthropology, consumers in a developing market (India) attitudinally preferred non-local COO brands, which they perceived to be of superior quality and extend social status (especially if those brands originated from economically developed countries as consumers have a greater admiration for the lifestyle in economically developed countries).

A distinction, however, needs to be drawn based on the nature of the product. In this respect, Mohamad *et al.* (2000) found that Malaysian consumers display a greater purchasing attitude towards locally made clothes, but when it comes to value-added products, like watches, sunglasses and shoes, their purchasing attitude shifted to imported goods. Mohamad *et al.* (2000) also found that Malaysian consumers generally prefer local products less than products originating from developed countries (e.g. USA, France, Japan and Italy) and speculated that due to patriotism these same consumers held a more favourable attitude towards Malaysian products than towards products from other Southeast Asian countries (e.g. Singapore, Thailand, Indonesia, Hong Kong and Taiwan). Therefore, the following hypothesis can be formulated for the study:

- H2: SA and US respondents have a significantly more positive attitude towards the marketing practices of products they perceive to come from a developed market than those they perceive to be from another developing market.

PROBLEM INVESTIGATED AND RESEARCH OBJECTIVES

In an effort to increase revenue and profit, more businesses are expanding their operations to also target foreign markets, thereby marketing their products beyond their original domestic borders (Schiffman and Kanuk, 2007). This has led to fierce competition not only in international markets, but also in domestic markets where foreign competitors have entered. Marketers therefore need to continuously identify new ways to appeal to consumers in both domestic markets (that are targeted by foreign marketers) as well foreign markets (where they are expanding their operations to).

With the expansion to previously untapped markets, it is becoming increasingly important for marketers to understand the effect of COO as a possible influence on consumer decision-making and purchasing behaviour (Zbib, Wooldridge, Ahmed and Benlian, 2010). In fact, it is consumers' attitudes towards COO that should be considered as attitude captures consumers' opinions towards a product (Blackwell, Miniard and Engel, 2006), or as in the case of this study, marketing practices. Studying consumer attitudes with regard to COO as well as marketing practices, are therefore important as attitudes influence consumers' purchase and consumption decisions (Blackwell, Miniard and Engel, 2006).

Although numerous studies focusing on the effect of COO on consumer decision-making have been documented in literature (Yasin, Noor and Mohamad, 2007; Chao, Wuhrer and Werani, 2005; Han, Yoon and Vargas, 2005; and Liu and Johnson, 2005, to name but a few), little research has been done to compare consumers from different countries with

regard to their attitude towards the marketing practices of products they perceive to be from a particular market.

The purpose of this study is therefore to compare attitudes towards marketing practices of consumers from a developed market (the US for the purpose of this study) and a developing market (SA for the purpose of this study) towards products they perceive to be from their respective home markets, a developed market (the UK for the purpose of this study) and a developing market (China for the purpose of this study).

The following objectives were thus formulated for this study:

- Determine and compare the attitude towards the marketing practices held by SA and US students of products they perceive to be from their respective home markets, a developed market as well as a developing market.
- Determine whether SA and US students differ with regard to their attitude towards the marketing practices of products they perceive to be from their respective home markets, a developed market as well as a developing market.

It is important to note that this study focused on determining the attitudes of students towards products they perceive to originate from their respective home markets, a developed market as well as a developing market in general and not with a specific product or product category in mind. Subsequently scale items suitable for such an approach were used to measure respondents' attitudes. The next section explains the research methodology in more detail.

RESEARCH METHODOLOGY

The target population of the study included second-year students, younger than 30 years of age, taking a marketing module at a South African and a United States university. Since both universities selected for the study were located outside a major metropolitan area and because they were very similar in size, it was possible to perform a comparative study. It was decided to conduct a census of the target population on the two campuses as the researchers had easy access to the target population. However, as some students did not attend their classes on the day of the survey, the envisaged census did not materialise and the absent students were thus excluded from the census.

A self-administered questionnaire using structured questions was used to collect data from respondents. An important pre-requisite for respondents to participate in the study was that

they were born in either SA or the US, due to the nature of the questions asked in the questionnaire, as will become evident in subsequent paragraphs.

The questionnaire measured respondents' attitudes towards marketing practices of products perceived to be from their respective home markets (SA and the US), a developed market (UK), and a developing market (China). The UK was chosen as a developed market and China as developing market as the researchers were confident that most, if not all, South African and United States respondents would be familiar with products from these markets and would, therefore, have definite attitudes towards products from the selected markets.

The questionnaire determined respondents' basic demographics and included a question regarding respondents' nationality to ensure that only respondents from the two home markets (SA and the US) participated. The questionnaire furthermore included multiple-item, unlabelled, seven-point scales that measured respondents' attitudes. Respondents had to indicate their level of agreement with a number of scale items or statements in relation to their respective home market (SA or US), a developed market (UK) and a developing market (China). Multiple-item scales are typically used to measure multiple items linked to a particular object or construct (Aaker, Kumar and Day, 2004). In this instance, only the endpoints of the scales were identified with 'strongly disagree' at the lower end and 'strongly agree' at the higher end of the scale (Burns and Bush, 2000). Scale items considered reliable and valid were included in the questionnaire. These scale items were taken from the work of Darling and Arnold (1988), Darling and Wood (1990) and Klein *et al.* (1998), as published in the Marketing Scales Handbook (Bruner, Hensel and James, 2005). The scale items measured '*attitude towards marketing practices*' (13 items). The scale items used in this study are presented in Table 1. The questionnaire was pre-tested before it was fielded.

Table 1: Scale items used to measure 'attitude towards marketing practices'

The warranties and guarantees of products made in _____ are generally not adequately backed by the firms that sell the products.*
In general, repair and maintenance services produced for products made in _____ are adequate.
The packages of products made in _____ are well-designed and are available in an adequate number of sizes.
The package labels and directions for use of products made in _____ are usually understandable and informative.
Products made in _____ are usually quite inexpensive in comparison to similar products

from other countries.
Products made in _____ are usually reasonably priced in comparison to similar products from other countries.
The brand names of products made in _____ are easily recognisable and generally quite well-known.
Products made in _____ are usually available in the retail stores in which one expects to find them.
The retail stores that carry products made in _____ usually have a good reputation.
Products made in _____ are usually well-displayed and merchandised in retail stores.
The advertisements of products made in _____ are usually believable and provide a reliable source of product information.
More advertising and promotion is needed for products made in _____ in order to better inform consumers about availability.*
The advertising and promotion of products made in _____ is usually very poor in comparison to that for the products of other countries.*

* Negatively phrased scale item

As is evident from Table 1, three scale items are negatively phrased. For data analysis purposes, the data obtained from these statements were transformed to present inverted scores for the negatively-scaled items.

Construct reliability for the measurement set (attitude towards marketing practices) for products originating from the home market, a developed market and a developing market were assessed (presented in the following section) and an overall mean score was calculated for the measurement set to allow for statistical comparison.

In order to determine whether SA and US students have a significantly more positive attitude towards marketing practices of products they perceive to be from their respective home markets than those that come from a developed market and developing market respectively, paired samples t-tests were conducted. The paired samples t-tests determine whether statistically significant differences exist between the three pairings of countries (home market and developed market, home market and developing market and developed market and developing market) in terms of the overall mean scores calculated for each of the two measurement sets (H1 and H2). A p-value of less than 0.05 is indicative of statistical significance for accepting/rejecting the hypotheses.

RESULTS

The following section provides an exposition of the distribution of results as well as the validity and reliability of the measurement set (attitude towards marketing practices) used in the study. A demographic profile of respondents is provided as well as the findings in terms of the measurement set and the related hypotheses formulated for the study.

Distribution of results

Although not imperative to do so if the sample size is larger than 30 (Eiselen, Uys and Potgieter, 2007), the researchers decided to determine whether the results obtained for each of the scale items show a normal distribution. The kurtosis and skewness of the distribution of the results for each scale item were examined. According to West, Finch and Curran (1995), a scale item for which the skewness of the distribution is less than 2.00, or where the kurtosis of the distribution is less than 7.00, falls within acceptable limits of normality. All scale items measured were found to fall within these limits and can therefore be assumed to show a normal distribution. Since scale items are normally distributed and the sample size is large ($n = 362$), a parametric test was used for testing the hypotheses (paired samples t-test).

Validity

As mentioned previously, scale items were taken from a measurement set used to measure attitudes towards marketing practices in studies published in scholarly journals and adapted for use in this study (Darling and Arnold, 1988; Darling and Wood, 1990; Klein, Ettenson and Morris, 1998). Results from the single-construct equation models indicated that the scale items contained in the original measurement set '*had significant paths to the constructs and the residuals were low*' (Bruner, Hensel and James, 2005).

Reliability

Cronbach's alpha was used to calculate the reliability of the measurement sets used in this study. A value of 1 indicates the highest level reliability, while a value of 0.70 is considered to be the lower level of acceptability (Hair, Anderson, Tatham and Black, 1998). Table 3 presents the Cronbach's alpha values. The Cronbach's alpha values of the three measurement sets measuring '*attitude towards marketing practices*' increase when the scale item '*products made in _____ are usually quite inexpensive in comparison to similar products from other countries*' is removed from the measurement set. Based on this finding, it was decided to remove this scale item. It is evident from Table 2 that each measurement set used in the study can be considered reliable.

Table 2: Cronbach's alpha values for measurement sets used in the study

Measurement set	Cronbach's alpha
Attitude towards marketing practices of products originating from a home market (12 scale items)	0.766
Attitude towards marketing practices of products originating from a developed market (12 scale items)	0.725
Attitude towards marketing practices of products originating from a developing market (12 scale items)	0.750

Demographic profile of respondents

In total, 362 respondents participated in the survey. Table 3 reflects the demographic profile of the respondents. Of the 362 respondents, 220 (60.8%) were South African students and 142 (39.2%) were American. Slightly more females (53.3%) than males (46.7%) participated in the study.

Table 3: Demographic profile of respondents

	Overall sample	SA students	US students
Nationality	Count and percentage		
Respondents	362 (100%)	220 (60.8%)	142 (39.2%)
Gender	Count and percentage		
Male	169 (46.7%)	103 (60.9%)	66 (39.1%)
Female	193 (53.3%)	117 (60.6%)	76 (39.4%)

Attitudes toward marketing practices

Respondents furthermore had to indicate their level of agreement with 12 scale items that measure attitude towards the marketing practices of products they perceive to originate from their home market, a developed market (UK) and a developing market (China). A 13th scale item was removed, as reported earlier, since the Cronbach's alpha value increased when this item was deleted. Table 4 presents the mean scores obtained, on a scale from 1 to 7 (where 1 is *strongly disagree* and 7 is *strongly agree*), of each of the scale items for each market as well as the overall mean score for the measurement set for each market for SA respondents, with Table 5 providing the same for US respondents.

Table 4: Mean scores for 'attitude towards marketing practices' scale items for SA respondents

Scale item	Home market	Developed market	Developing market
The warranties and guarantees of products made in _____ are generally adequately backed by the firms that sell the products	4.23	4.64	3.71
In general, repair and maintenance services produced for products made in _____ are adequate	4.43	4.44	3.64
The packages of products made in _____ are well-designed and are available in an adequate number of sizes	4.78	5.16	4.51
The package labels and directions for use of products made in _____ are usually understandable and informative	5.30	5.28	4.05
Products made in _____ are usually reasonably priced in comparison to similar products from other countries	4.34	3.91	4.74
The brand names of products made in _____ are easily recognisable and generally quite well-known	4.82	4.93	4.17
Products made in _____ are usually available in the retail stores in which one expects to find them	5.07	4.66	4.57
The retail stores that carry products made in _____ usually have a good reputation	4.70	5.18	3.76
Products made in _____ are usually well-displayed and merchandised in retail stores	4.71	4.82	4.18
The advertisements of products made in _____ are usually believable and provide a reliable source of product information	4.68	4.85	3.56
Less advertising and promotion is needed for products made in _____ in order to better inform consumers about availability*	2.79	3.46	3.69
The advertising and promotion of products made in _____ is usually very good in comparison to that for the products of other countries*	4.17	4.60	4.03
Overall mean score for 'attitude towards	4.50	4.68	4.05

marketing practices'			
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It is evident from Table 4 that respondents' overall attitude towards marketing practices of products they perceive to originate from a developed market (UK) is more favourable than their attitude towards the marketing practices of products they perceive to be from their home market (SA) and a developing market (China). Respondents also have a more positive attitude towards the marketing practices of products from their home market product than towards products they perceive to be from a developing market.

The results of the paired samples t-test indicate that significant differences exist between the overall mean scores for attitude towards marketing practices held by respondents regarding products originating from their home market (SA) versus products from a developed market (p-value = 0.001) and a developing market (p-value = 0.000), respectively. Respondents hold a significantly more positive attitude towards the marketing practices of products originating from a developed market (UK) (mean = 4.68) than for products they perceive to originate from their home market (SA) (mean = 4.50) and a developing market (mean = 4.05). A significant difference also exists between the mean scores for a developed market (mean = 4.68) and a developing market (mean = 4.50; p-value = 0.000).

It can therefore be concluded that respondents hold a significantly more positive attitude towards the marketing practices of products they perceive to originate from a developed market (UK) than products they perceive to be from their home market (SA) and a developing market (China) (p-value < 0.05). There is also a significant difference in respondents' attitude towards the marketing practices of products they perceive to originate from a developed market and a developing market.

Table 5: Mean scores for 'attitude towards marketing practices' scale items for US respondents

Scale item	Home market	Developed market	Developing market
The warranties and guarantees of products made in _____ are generally not adequately backed by the firms that sell the products	4.71	4.48	4.25
In general, repair and maintenance services produced for products made in _____ are adequate	4.70	4.16	4.06
The packages of products made in _____ are well-	5.03	4.40	4.68

designed and are available in an adequate number of sizes			
The package labels and directions for use of products made in _____ are usually understandable and informative	5.32	4.53	4.40
Products made in _____ are usually reasonably priced in comparison to similar products from other countries	4.49	4.01	4.60
The brand names of products made in _____ are easily recognisable and generally quite well-known	5.56	3.82	4.35
Products made in _____ are usually available in the retail stores in which one expects to find them	5.40	4.10	4.76
The retail stores that carry products made in _____ usually have a good reputation	5.22	4.46	4.40
Products made in _____ are usually well-displayed and merchandised in retail stores	5.24	4.21	4.49
The advertisements of products made in _____ are usually believable and provide a reliable source of product information	4.82	4.14	4.00
Less advertising and promotion is needed for products made in _____ in order to better inform consumers about availability	3.72	3.31	3.87
The advertising and promotion of products made in _____ is usually very good in comparison to that for the products of other countries	4.98	4.15	4.46
Overall mean score for 'attitude towards marketing practices'	4.94	4.16	4.37

It is evident from Table 5 that respondents' overall attitude towards marketing practices of products they perceive to originate from their home market (US) is more favourable than their attitude towards the marketing practices of products they perceive to be from another developed market (UK) and a developing market (China). Unexpectedly, respondents have a more positive attitude towards the marketing practices of products from a developing market than to products they perceive to be from another developed market.

The results of the paired samples t-test indicate that significant differences exist between the overall mean scores for attitude towards marketing practices held by respondents regarding products originating from their home market (US) versus products from a developed market (p-value = 0.000) and a developing market (p-value = 0.000), respectively. Respondents hold a significantly more positive attitude towards the marketing practices of products originating from their home market (US) (mean = 4.94) than for products they perceive to originate from another developed market (UK) (mean = 4.16) and a developing market (mean = 4.37). Respondents also hold a significantly more positive attitude towards the marketing practices of a developing market (mean = 4.37) than towards the marketing practices of products originating from another developed market (mean = 4.16; p-value = 0.007).

It can therefore be concluded that respondents hold a significantly more positive attitude towards the marketing practices of products they perceive to originate from their home market (US) than towards products they perceive to be from another developed market (UK) and a developing market (China) (p-value < 0.05). There is also a significant difference in respondents' positive attitude towards the marketing practices of products they view to be from a developed market and a developing market with consumers holding a more positive attitude towards the marketing practices of the developing market.

With respect to hypothesis 1, that SA and US respondents have a significantly more positive attitude towards the marketing practices of products they perceive to be from their respective home markets than those that come from other markets, the following findings were made:

- SA respondents have a significantly less positive attitude towards the marketing practices of products they perceive to be from their home market than for products that come from a developed market, but they do have a significantly more positive attitude towards the marketing practices of products that originate from their home market than those from a developing market.
- US respondents have a significantly more positive attitude towards the marketing practices of products originating from their home market than towards the marketing practices of products they perceive to be from other markets.

Hypothesis 1 can therefore be partially supported, since US respondents have a significantly more positive attitude towards the marketing practices of products they perceive to be from their home market than those that come from either another developed or developing market, while SA respondents are only more positive towards their home market products

when compared to a developing market, but the opposite is true concerning a developed market.

With respect to hypothesis 2, that SA and US respondents have a significantly more positive attitude toward the marketing practices of products they perceive to come from a developed market than those they perceive to be from a developing market, the following findings were made:

- SA respondents have a significantly more positive attitude towards the marketing practices of products they perceive to be from a developed market than for products that come from a developing market.
- US respondents have a significantly more positive attitude towards the marketing practices of products they perceive to be from a developing market than to products they perceive to be from another developed market.

Hypothesis 2 can therefore be partially supported, since SA respondents have a significantly more positive attitude towards the marketing practices of products they perceive to come from a developed market than those they perceive to be from a developing market; however, the opposite is true for US respondents, who exhibit a more positive attitude towards the marketing practices of products from a developing market than products from another developed market.

IMPLICATIONS FOR MANAGERS AND RECOMMENDATIONS

The results from this study holds implications for marketers who wish to compete in international markets as well as for those who want to successfully compete in their home markets against foreign competitors.

Marketers competing in their own markets with international competitors should be aware that the development status (developed or developing) of their own market could have a significant influence on how local consumers perceive their marketing practices. Marketers in developed markets should be aware that their local consumers could view their practices more favourably than those of other developed as well as developing markets. Marketers in developing markets should therefore continually monitor the marketing practices of international entrants from developed and developing markets to note significant positive changes in foreign marketing practices and to ensure that their own practices are viewed more positively than those from foreign markets.

Marketers in developing markets, in contrast, should be aware that consumers in their domestic markets may view the marketing practices of products from developed markets more positive than their own marketing practices, but would possibly view their marketing practices more positively than those from other developing markets. Domestic marketers in developing markets should therefore try to change consumer attitudes regarding their own and developed markets' marketing practices by changing consumer beliefs regarding their own practices and by establishing patriotic beliefs (for instance "proudly South African"). By doing so, consumers may opt for local market offerings rather than those from developed markets.

Marketers entering international markets should be aware that their home markets' development status could have an influence on how their marketing practices are viewed by consumers in international markets. Marketers entering developed markets should be aware that consumers would probably have a more positive attitude towards their marketing practices if they were from a developing rather than a developed market. Marketers from a developing market should therefore emphasise this fact through their marketing practices, while those from a developed market should downplay their COO by rather focusing on, and trying to change, those beliefs that could foster a more positive attitude towards their marketing practices.

Finally, marketers entering developing markets should be aware that their marketing practices could be viewed more positively if they are from a developed rather than a developing market. Marketers from developed markets should therefore emphasise this fact in their marketing practices to promote a positive attitude towards their practices. In contrast, marketers from developing markets should identify and focus on those beliefs among consumers in the developing market that could positively influence their attitudes towards their marketing practices. By doing so, marketers could possibly compete effectively with international entrants from developed markets.

LIMITATIONS OF THE RESEARCH

A number of limitations can be reported for the study. Firstly, the target population of the study included respondents from only two universities, one from South Africa and one from the US. The results are therefore not representative on a national level, but only reflect the views of those who participated in the study. Secondly, the population only included students taking a marketing module. It could therefore be argued that surveying respondents on a topic related to their field of study could lead to some level of response bias. Attitudes of students not studying marketing could therefore have been different.

Thirdly, the questionnaire referred to specific countries (UK and China) and not 'developed' and 'developing' countries. Respondents' attitudes could therefore have been different had other developed and developing countries been chosen.

Finally, this study considers COO effect-related concepts and constructs without taking other potential influences, such as brand names and promotional efforts, into account. Bhaskaran and Sukumaran (2007) suggest that in order to get a complete picture of attitudes towards products originating from a particular market, it is important not to ignore other influences.

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THE USE OF HEDONIC PRICING IN THE VALUATION OF SOUTH AFRICAN WINES

Key words: *wine, prices, hedonic*

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Abstract

Rationale: Informed by the econometric valuation methodologies documented in van Rensburg and Priilaid (2004) and Priilaid and van Rensburg (2006), this paper employs a dataset of South African red and white wines emanating from the 2007 period to explore the relationship between price, value and value-for-money.

Approach: The analysis is underpinned by a suite of regression models developed from a data-sample of some 1358 wines, which, along with red and white blends includes eight cultivars.

Results: This study notes (1) the unequal pricing of consecutive increments in wine quality ratings (as measured in stars), and (2) that the relationship between value and price can be better approximated by treating successive wine quality increments as dichotomous “dummy” variables.

Import: Allowing thus for the possibility of the non-linear hedonic pricing avoids the bias of value-for-money misleadingly being neglected at the top end of the quality spectrum and excessively identified at the bottom thereby assisting retailers and consumers in better identifying wines that offer value-for-money.

1. INTRODUCTION

This paper moves on from the van Rensburg and Priilaid econometric valuation methodology (2004) which mapped out the relationship between wine price and value. In the earlier paper, the two quality metrics; (blind and sighted “star-styled” ratings); were used as explanatory variables in a multiple regression framework. For simplicity, in the rest of the paper we shall refer to this specification as the “linear” model in the sense that the fair pricing increment assumed to be associated with each successive star was assumed to be equal i.e. there is a straight-line relationship between quality rating and value.

While, in the main, the linear approach has provided workable wine valuations, at the extreme ends of the quality spectrum, in particular, it has not. Accordingly, this study analyses the price-quality continuum, and invokes a “dummy-styled” approach to address the possibility of a non-linear price-to-quality relationship. This analysis echoes that of the one by Priilaid and van Rensburg (2006), though here with a dataset two-and a half times the size of its predecessor²⁸. Employing a dataset of 1358 red and white wines tasted during the 2007 period we demonstrate that the dummy or non-ordinal approach avoids the bias of value-for-money misleadingly being identified excessively at the bottom end of the quality spectrum and neglected at the top end. Such bias avoidance provides for more economically sensible valuations across the continuum of quality, thus assisting retailers and consumers in better identifying wines that offer value-for-money.

²⁸ The 2006 study employed 537 wines.

The paper is organised accordingly: section two reviews the literature; section three describes the data set and section four presents and contrasts the linear and dummy valuation techniques; exploring also the notion of value-for-money - and where along the value spectrum it might be identified. Section Five concludes.

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

As a point of departure, this review invokes Peter & Olsen's (2002) supply and demand views of pricing, and the subsequent arguments presented by van Rensburg and Priilaid (2004) in their work on hedonic pricing of South African red wine. In short, Peter and Olsen link price to business costs on one hand, and to customer costs on the other. Together with profit, business costs sum to the seller's price. From the buyer's perspective, costs incurred include all the effort and time spent in acquiring the necessary funds and then in locating the product in question. *"If, after all of these costs, there is still sufficient product value in the eyes of the purchaser then a market exchange is possible"* (van Rensburg and Priilaid, 2004: 53).

In terms of this producer-customer pricing model, the world's ongoing oversupply of wine has placed more power in the hands of the discerning customer with the world-wide recession sparked by the sub-prime housing crisis and bank failures of September 2008 likely to hasten the decline of marginal wine farmers²⁹. Coupled to this producer-side dynamic is the ongoing availability of consumer friendly wine guides. Comparative wine shopping is becoming easier than ever. As a consequence, there is a clear understanding in both the popular and academic media that wine marketing has to take on a customer-facing orientation in order to successfully move the product.

²⁹ Michael Fridjhon, recently notes for example that the Australian wine industry is severely vexed by problems of drought and oversupply. *"Five years ago the industry was in full-time bloom – there was worldwide growth. Australia had produced its 2025 strategic plan and by 2005 had achieved many of its goals. But drought and recession over the past few years have led to dramatic problems. Australia now has 100 million cases in oversupply – or one billion litres. Its surplus is bigger than SA's (entire) wine production, just to put it into perspective,"* says Fridjhon (in Morgan, 2010, 12). Similar effects have been noted in the USA. *"There's a joke going around West Coast wine circles: What's the difference between a case of syrah and a case of pneumonia? You can get rid of pneumonia. It would be funnier if it weren't so sad. In the last few years, beginning even before the economic downturn, sales of American syrah dropped off a cliff,"* writes Eric Asimov (2010) of the *New York Times*. In Europe too, the over-supply of commodity wines has forced a rethink of strategy, with EU countries like Spain gaining being granted quality driven planting permits at the expense of traditional table-wine producing areas in countries like France (Morgan, 2010).

Moving from the broader context of wine supply and demand, to the narrower perspective of the wine consumer's search for value, we introduce Rosen's (1974) hedonic³⁰ price function that characterises wine as a set of underlying product attributes, each of which can be priced. Approximated through regression analysis, the aggregate bottle price of any particular wine is hence *the sum of the prices of all such hedonic attributes*. Theory suggests that each consumer thus opts for a set of wine attributes so as to maximise total hedonic value subject to a budget constraint. Such attributes can be intrinsic/functional or extrinsic/symbolic. (See Oliver, 1997, Bagozzi, Gopinath & Nyer, 1999; Rust & Oliver, 2000; Kivetz & Simonson, 2002a and 2002b; Chernev, 2004; Chitturi, Raghunathan & Mahajan, 2007 and 2008; and Priilaid and van Rensburg, 2010 *in press*.)

In the absence of prior purchase and sampling, there is usually no direct means of assessing the intrinsic merit of a particular wine at point-of-purchase³¹. This said, the possibility of guiding consumers to pre-identified wines of value (as mooted by Thrane (2004), and demonstrated by van Rensburg and Priilaid (2004)), suggests that wine lovers will soon be equipped with more than enough consumer-facing information to make efficient wine-purchasing decisions. In South Africa this is already the case; with large wine retailers like Pick 'n Pay, Makro and Ultra Liquors publishing quarterly catalogues of recommended wines with recommendations based on rough estimates of the price-to-quality relationship of each wine cited.

By contrast to this injunction to provide the customer with useful and appropriate purchase information, in the formal study of hedonic wine pricing, the problem defined is usually one of solving for increasingly higher levels of statistical correlation to price. Very few have developed consumer facing models that employ meaningful candidate attributes. A review of the last decade's wine hedonic literature reveals an inclination to the former: with a dominant view that seeks higher and more elusive statistical correlation to price regardless of the consumer-based merit of the candidate attributes under analysis. (*Inter-alia*, see Oczkowski 1994, 2001, Nerlove 1995, Coombris, Lecocq and Visser, 1997, Landon and Smith 1997 and 1998, Blair and Burley 1998, Wade 1999, Angulo, Gil, Gracia and Sanchez 2000, Corsi and Ashenfelter 2000, Schamel 2000, Schamel and Anderson 2001, Ling and Lockshin 2003, Bombrun and Sumner 2003, Wood and Anderson 2003, and Cardebat and Figuet 2004).

³⁰ The term "hedonics" is derived from the Greek word meaning pleasure. Within economics, hedonics refers to the efficacy, utility or pleasure derived through the consumption of a particular service or good.

³¹ In the instance where a consumer is assessing a wine with a view to purchase, price aside, a number of other extrinsic cues (such as varietal, vintage, area of origin and type of closure) can assist.

By comparison, more recent studies focus rather on the second econometric problem: which is attempting to interpret and address the customer need for *value* and then to model price-based regressions accordingly (see Thrane 2004, van Rensburg and Priilaid 2004, and Priilaid and van Rensburg 2006). These works seek to develop consumer-friendly hedonic models that focus on reputable wine-quality metrics rather than on production-facing factors (such as annual rainfall patterns or alcohol levels) that have little or no relevance to the consumer. While some might counter that such wine quality measures are generally flawed because they are subjectively derived (Oczkowski, 2001), there is rising academic (see Johnson and Bruwer, 2004) and popular acknowledgement of the extent to which consumer purchases are driven by these self-same wine-expert ratings. Since most ordinary consumers have neither the time nor the money to assess the quality of all wines available, nor can even profess to taste with any real level of discernment, studies show that we use wine expert ratings as a risk-reducing proxy to guide our own buying and consumption behaviour (see Siegrist & Cousin (2009) and Priilaid, Feinberg, Carter & Ross (2009)).

This being the case, we are then faced with two challenges: (1) identifying what wine expert ratings best reflect quality and (2) developing the means by which these ratings can best be treated in order that the resultant hedonic function demonstrates optimal customer-facing value.

With respect to the first challenge, it is worth asking why alternative extrinsic cues such as vintage, area of origin and alcohol level are not explicitly included in the analysis. The view taken by this study is that such cues are secondary in nature, serve as placebos, and are ultimately captured in the sighted quality metric that serves as one of the two the primary drivers of this model. (See Priilaid 2006 and 2007).

In lieu of the behavioural model above, the customer is faced with the problem of how best he or she can best identify value and value-for-money when faced with a plethora of wine price and quality assessment data. As a point of departure, this paper uses the van Rensburg and Priilaid econometric valuation methodology (2004) which mapped out the relationship between wine price and value. In that paper, two quality metrics (blind and sighted “star-styled” ratings) were treated on a linear / ordinal scale. While, in the main, this approach did provide workable wine valuations, at the top end of the quality spectrum, however, it tended to undervalue wines relative to their intrinsic merit. In reviewing the earlier pricing models developed by the authors, this has been a particular concern to South Africa’s most respected wine critic, Michael Fridjhon (*personal communication*), most especially since the upper-level price premiums are generally linked to incremental

increases in wine quality. But is this so? Critical consumers might well counter that these price premiums have little to do with quality-driven business costs and constitute no more than brand-related price increases dreamt up by wine marketers (Alpert, Wilson and Elliot, 1993). While linear hedonic models cannot resolve such arguments, this paper argues that non-linear models can.

At the bottom-end of the quality spectrum, linear valuations have also caused problems of undervaluation, in some instances, as shall be demonstrated, even yielding negative valuations. While this has not caused any practical problems (people will not drink bad wines if they can avoid them), these top and bottom end valuation anomalies have led to a view that the linear hedonic pricing model is inadequate.

By way of redress, this article introduces a non-linear or dummy-styled approach to address the asymmetrical (non-linear) price-to-quality relationship. The contribution of this alternative approach is that through the avoidance of bias against higher star ratings, we demonstrate how more customer-friendly and economically sensible valuations can be computed, and thus how value-for-money can be ably identified and located within both the bottom and top end of the wine market.

2. DESCRIPTION OF THE DATA

Consumer-facing candidate variables for explaining wine prices are portrayed below in Table 3.1. A discussion of each candidate variable follows.

INSERT TABLE 3.1 HERE

3.1 Wine varietal

Along with red and white blended wines, eight South African-grown cultivars are assessed in this study: cabernet sauvignon, merlot pinotage, pinot-noir, shiraz, chardonnay, chenin blanc and sauvignon blanc. The cultivars selected for this study constitute most of South Africa's national vineyard. (See Table 3.2 for details) Colombard is the third most prolifically planted grape and is excluded since most of its grapes are employed in the production of brandy. Based on its lofty prices and the profile of some of its producers, the ever fickle though niche-like pinot noir is also included in this study. Marginal white wine equivalents like sémillon and viognier (respectively 1.05% and 0.62% of the national vineyard) are however excluded due to lack of workable data. So too are cinsaut (2.78%), ruby cabernet (2.61%), hanepoort (2.60%) and Cape Riesling (1.13%) since the fruit from these cultivars is generally employed in the production of low-priced blends (Boom, 2006, 392).

INSERT TABLE 3.2 HERE

The total sample of 1358 wines decomposes into two subsets: red wines: (n = 896) and white wines (n = 462). Each wine has assessments from both *WINE* magazine (over the period January to December 2007), and the annual *John Platter* wine guide. In aggregate they represent the 2007 red and white wine market in South Africa. Table 3.3 below depicts the data-set's spread of *WINE* magazine and *Platter* star ratings per varietal over this period.

INSERT TABLE 3.3 HERE

The mean average price for the sample is R78.76. The price maximum, minimum and standard deviation for the sample are R730, R8.50 and R58.32 respectively. Within the red wines, pinot noir is on average the most expensive wine per bottle (R108.24), followed by red blends (R96.59), shiraz (R93.88), cabernet sauvignon (R83.34), merlot (R73.52) and finally pinotage (R70.64). Within the white sample, sauvignon blanc is on average the most

expensive wine per bottle (R73.52), followed by chardonnay (R71.59), white blends (R59.41), and lastly chenin blanc (R42.22).

3.2 Measurements of wine quality

Quality *per sé* is a contentious issue, most especially since wine merit is difficult to assess objectively and precisely (Oczkowski, 2001). While this often results in a divergence of wine rating scores, at stake is whether or not consumers respond favourably, and if so, to which ratings and to what extent. Some ratings and awards hold more currency than others. At a global level, the role of *Robert Parker's Wine Guide* and Parker's bi-monthly *Wine Advocate* journal provide a case in point. "*His influence is unparalleled in the history of wine journalism*" says the UK wine magazine, *Decanter* (Parker, 2002).

South Africa has two (albeit somewhat diminished) versions of Parker's influence on the wine trade: the *John Platter Guide* published annually since 1981 and *WINE* magazine, launched in 1993. While other rating systems do exist (including the Veritas, Fairbairn Capital and Michael Angelo awards), as wine purchase guides these are not as comprehensive or as widely acknowledged as either *WINE* or *Platter*.

Platter's team taste their wines sighted and employ the five-star or 20-point scoring system. Wines scoring 13 out of 20 receive one star and are rated average and acceptable. Appealing, above-average wines are awarded two-star ratings – an equivalent of 14 points. Three-star wines score 15 out of 20 and are deemed good to very good, with fine character and style: suitable for cellaring. A score of between 16 and 17 equates to a four-star wine of excellence and distinction. For a score of 18 or more out of 20, five stars are awarded, denoting a superlative wine, a world-class masterpiece. Unacceptable wines receive a "0 star" rating. Over the 868 red wines tasted, the mean average *Platter* score is 3.61, with a maximum, minimum and standard deviation for the sample of 4.5, 1.5 and 0.90 respectively. By comparison to the reds, the mean average *Platter* score for the 462 white wines tasted is 3.50, with a maximum, minimum and standard deviation for the sample of 4.5, 1.5 and 0.73 respectively.

WINE tastes panels' rate all their wines blind; unlike *Platter*. However, the same five-star scoring system is employed, with ratings awarded on the basis of discussion and consensus rather than arithmetical averaging. The authenticity of the tasting process is adjudicated by a professional auditing firm. Of the red wines assessed in this study, the mean average *WINE* magazine score is 2.65, with a maximum, minimum and standard deviation for the

sample of 4.5, 1.5 and 0.90 respectively. Equivalent figures for the white wine sample are mean: 2.70, maximum: 5, minimum: 0, and standard deviation: 0.82.

In a previous South African study using *Platter* and *WINE* metrics (see van Rensburg and Priilaid, 2004) grand arithmetic averages were generated measuring the mean of all quality ratings on record for each farm's varietal produce. While these historical figures serve as something of a reputational proxy, they fail to accommodate year-to-year dips in quality. With the view that customer-friendly pricing models should seek to ensure that inferior wines are properly identified, and thus avoided (see Unwin (1999) and Thrane (2004)), this study has forsaken the reputational model for one that treats each individual wine on its merits.

3. RESULTS AND DISCUSSION

4.1. Methodology

As in the van Rensburg and Priilaid studies of 2004 and 2006, the ordinary least squares (OLS) regression analysis methodology is employed. So doing, the cross-section of prices (*price*) is modelled for the similar goods $i=1\dots n$ as a function of K consumer desirable (CD_k where $k=1, \dots, K$) characteristics:

$$price_i = \alpha + \sum_{k=1}^K b_k CD_k + \varepsilon_i$$

where: α = the intercept term as estimated by OLS

b = the K slope coefficients as estimated by OLS

CD = the K 'consumer desirables'

ε = a random residual error term following classic assumptions

As in the above cited studies, the classification of the explanatory variables (CD) includes only those that are likely to constitute perceived value for the consumer, in this case blind and sighted tasting scores as conducted by *WINE* magazine and *John Platter*, respectively. Using this approach, the model disaggregates the price of each wine into value and mispricing components.

The 'intrinsic value' of each wine, i , is then estimated:

$$value_i = price_i - \varepsilon_i$$

$$= \alpha + \sum_{k=1}^K b_k CD_k$$

So doing, the derived fitted values equate to estimates of intrinsic value; the difference between value and price reflecting the level of mispricing (ε_i) in each instance. In this manner, a wine's price and valuation may be charted, thus enabling the identification of a "value frontier": that region where maximum value relative to price may be observed (van Rensburg and Priilaid, 2004).

Using this methodology, the following two valuation models are estimated and contrasted:

$$OV_i = \alpha + b_1 cab_i + b_2 merlot_i + b_3 pinot\ noir_i + b_4 shiraz_i + b_5 red\ blend_i + b_6 chardonnay_i + b_7 sauv\ blanc_i + b_8 white\ blend_i + b_9 WINE\ Stars_i + b_{10} Platter\ Stars_i$$

$$DV_i = \alpha + b_1 cab_i + b_2 merlot_i + b_3 pinot\ noir_i + b_4 shiraz_i + b_5 red\ blend_i + b_6 chardonnay_i + b_7 sauv\ blanc_i + b_8 white\ blend_i + b_9 JP^{0.5}_i + b_{10} JP^1_i + b_{11} JP^2_i + b_{12} JP^{2.5}_i + b_{13} JP^3_i + b_{14} JP^{3.5}_i + b_{15} JP^4_i + b_{16} JP^{4.5}_i + b_{17} W^1_i + b_{18} W^2_i + b_{19} W^{2.5}_i + b_{20} W^3_i + b_{21} W^{3.5}_i + b_{22} W^4_i + b_{23} W^{4.5}_i + b_{24} W^5_i$$

where:

$OV_i =$ Ordinal Valuation of wine i .

$DV_i =$ Dummy Valuation of wine i .

$WINE\ Stars =$ *WINE* magazine rating of wine i .

$Platter\ Stars =$ *John Platter* rating of wine i .

$cab =$ 1 if wine i is a cabernet sauvignon; 0 if otherwise.

$merlot =$ 1 if wine i is a merlot; 0 if otherwise.

$pinot\ noir =$ 1 if wine i is a pinot noir; 0 if otherwise.

$shiraz =$ 1 if wine i is a shiraz; 0 if otherwise.

$red\ blend =$ 1 if wine i is a red blend; 0 if otherwise.

$chardonnay =$ 1 if wine i is a chardonnay; 0 if otherwise.

$sauv\ blanc =$ 1 if wine i is a sauvignon blanc; 0 if otherwise.

$white\ blend =$ 1 if wine i is a white blend; 0 if otherwise.

$JP^{0.5} =$ 1 if wine i obtained 0.5 *John Platter* stars; 0 if otherwise.

$JP^1 =$ 1 if wine i obtained 1 *John Platter* stars; 0 if otherwise.

$JP^2 =$ 1 if wine i obtained 2 *John Platter* stars; 0 if otherwise.

$JP^{2.5} =$	1 if wine i obtained 2.5 <i>John Platter</i> stars; 0 if otherwise.
$JP^3 =$	1 if wine i obtained 3 <i>John Platter</i> stars; 0 if otherwise.
$JP^{3.5} =$	1 if wine i obtained 3.5 <i>John Platter</i> stars; 0 if otherwise.
$JP^4 =$	1 if wine i obtained 4 <i>John Platter</i> stars; 0 if otherwise.
$JP^{4.5} =$	1 if wine i obtained 4.5 <i>John Platter</i> stars; 0 if otherwise.
$W^1 =$	1 if wine i obtained 1 <i>WINE</i> magazine stars; 0 if otherwise.
$W^2 =$	1 if wine i obtained 2 <i>WINE</i> magazine stars; 0 if otherwise.
$W^{2.5} =$	1 if wine i obtained 2.5 <i>WINE</i> magazine stars; 0 if otherwise.
$W^3 =$	1 if wine i obtained 3 <i>WINE</i> magazine stars; 0 if otherwise.
$W^{3.5} =$	1 if wine i obtained 3.5 <i>WINE</i> magazine stars; 0 if otherwise.
$W^4 =$	1 if wine i obtained 4 <i>WINE</i> magazine stars; 0 if otherwise.
$W^{4.5} =$	1 if wine i obtained 4.5 <i>WINE</i> magazine stars; 0 if otherwise.
$W^5 =$	1 if wine i obtained 5 <i>WINE</i> magazine stars; 0 if otherwise.

4.2. Model Construction

4.2.1. Preliminary Analysis

Figures 4.1 and 4.2 below illustrate the average price (in Rands) awarded to white³² wines during the 2007 period. Figure 4.1 depicts the sighted ratings, Figure 4.2, the blind.

INSERT FIGURES 4.1 & 2 HERE

Close scrutiny of these scattergrams, (particularly those derived from Platter ratings) reveals how price-per-star appears to increase in a non-linear fashion, especially from 3 stars upwards. Mispricing at the 0 and 1 star-level is also observable. This extent of mispricing is not as apparent in the sample of sighted assessments. In all cases the extent to which specific varietals impact on price-per-star is unclear.

Table 4.1 below presents the red and white wine correlation matrices of price and the two candidate variables as they appear in their form as ratio styled data. We note that price is most highly correlated with *Platter's* sighted scores (red correlation = 0.50, white correlation = 0.60) and then only with *WINE's* blind scores (red correlation = 0.25, white = 0.39). The correlation between these two styles of assessment is less than perfect (0.30 for red and 0.40 for white) and suggests the possibility for blind and sighted scores to contribute explanatory power without fear of excessive multi-collinearity.

³² Note: for sake of space only figures relating to white wines are featured in this article.

INSERT TABLE 4.1 HERE

On the basis of the descriptive statistics presented thus far, and for purposes of comparison, linear and “dummy-styled” regression models are developed independently for each of the blind and sighted assessment metrics. Avoiding the dummy trap, the varietal, *Platter* and *WINE* magazine rating-comparators employed throughout this paper are *pinotage* and *chenin blanc* (in the case of the red and white subsets, respectively) and one-and-a-half *Platter stars* and zero *WINE stars* respectively. While all regressions were treated for heteroskedasticity, none is observable. For each of the red and white wine datasets, the four preliminary regressions and their corresponding adjusted R-square values are presented in Tables 4.2 (reds) and 4.3 (whites) below. Through the lens of sighted and blind ratings, each table, presents and contrasts the linear and dummy style of data interpretation.

INSERT TABLE 4.2 AND 4.3 HERE

This done, Table 4.4 reflects the extent of percentage mispricing per star for each of the preliminary white wine regressions. Derived from the residual, mispricing represents the extent to which each wine is either under or over-priced relative to its underlying sighted or blind quality rating. Standard deviations appear in brackets.

INSERT TABLE 4.4 HERE

An analysis of mispricing levels (a proxy for value-for-money) relative to each quality rating clearly demonstrates the extent to which the price-to-quality relationship deviates from the linear form at both the top and bottom ends of the quality spectrum. In the instance of white wines, scattergrams depicting the mispricing-to-quality relationship for each of these preliminary regressions is presented in figures 4.3 through to 4.6 below.

INSERT FIGURE 4.3 TO 4.6 HERE

4.2.2. Price vs. Value

Informed to this point by the extent of the non-linear price-to-quality relationship, final regressions on price are derived to compute bottle value using firstly the linear and then the

dummy-styled approach. Details of the final red and white wine regressions appear in tables 4.5 and 4.6 below.

INSERT TABLE 4.5 AND 4.6 HERE

For the white wine subset, figures 4.7 and 4.8 below depict the consequent wine price-to-value scattergram for each of the final linear and dummy approaches. The van Rensburg and Priilaid paper (2004) ably demonstrates how, at any particular price point, wines located on the value and rip-off frontiers offer the best and worst value-for-money respectively. Once more these are graphically illustrated in the figures below.

INSERT FIGURES 4.7 AND 4.8

Comparing the price-to-value scattergrams of the linear and dummy models respectively, it becomes apparent that the dummy model provides a more realistic set of valuations. For the 2007 dataset of red wines the increase in the adjusted R-squared values from 26.73% (for linear model) to 33.81% (for the dummy model) shows a price correlation improvement of over 26%. By comparison, in the white wine dataset the adjusted R-squared values increase from 41.96% (for linear model) to 50.48% (for the dummy). This is a price correlation improvement of over 20%. Moving through each of the four price segments within the red wine dataset, the linear and dummy valuation averages appear roughly the same for low to medium priced wines (see table 4.7 below). However the valuations are dramatically impacted in the expensive R150-R199.99 and R200-plus price segments, where each additional increment in wine quality requires intensive capital outlays; such is the law of diminishing returns. Within the R150-R199.99 segment, the average dummy valuation is R139.01, 13% greater than the average linear valuation of R122.51. Within the premium R200-plus price segment, the average dummy valuation is R152.16, 17% greater than the average linear valuation of R130.07. Even more significant, however, is the measure of spread across the upper and lower price segments. Within the lower price segment, the dummy approach enforces a standard deviation *decrease* of 43%. In the upper price segment, the spread *increases* by more than twice that amount: 99%.

Moving through each of the four price segments within the white wine dataset, the above pattern is similar. Once more, the linear and dummy valuation averages appear roughly the same for low to medium priced wines (see again table 4.7 below). Distinctive variation is however observed in the expensive to premium priced R100-R149.99, R150-R199.99 and

R200-plus price segments. Within the R100-R149.99 segment, the average dummy valuation is R86.38, 9% greater than the average linear valuation of R79.47. Between R150 and R199.99 the variation between dummy valuations (average = R105.12) and their linear versions (average = R105.12) jumps to over 13%. These increases pale by comparison to the variation evinced in the premium-plus R200-plus price segment. Here the average dummy valuation is R121.57, 32% greater than the average linear valuation of R92.32.

A study of the measure of spread across the various white wine price segments is also revealing. Within the lower price segment, the dummy approach enforces a standard deviation *decrease* of between 4 and 18%. As with the red wine data-set however, in the upper price segments the linear to dummy spread *increases* dramatically: 241% in the R150 to R199 category, and R275% in the R200-plus.

INSERT TABLE 4.7 HERE

4.2.3. Value vs. Mispricing

This final section analyses the extent to which the relationship between value and extent-of-mispricing changes between the linear and dummy approaches – for white wines see figures 4.9 and 4.10 below.

INSERT FIGURES 4.9 AND 4.10 HERE

For both **red and white wine datasets**: an examination of the value-to-extent-of-mispricing relationship reveals four noteworthy features.

1. The *spread of mispricing* reduces significantly from the linear to the dummy version. In the case of red wines, the linear spread is 438.5% (166.2% to -272.3%); compared to the 312.7% (86.0% to -226.7%) in the dummy version. Similarly with the white wines, the linear spread is 474.2% (332.9% to -141.3%); compared to the 291.5% (83.3% to -208.2%) in the dummy version. A survey of the standard error of regression for each of the four final models yields a similar result. In the final red valuation models, the standard error drops from 55.70 (linear model) to 52.94 (dummy model). The final white wine valuations reveal a similar pattern: linear model: 26.26; dummy model 24.22.

2. Both at the bottom and top end of the quality continuum valuations predicted by the dummy model are markedly *higher* than those predicted by the linear model.

At the bottom end for example, whereas in the instance of red wines the lowest 15 linear valuations are all negative, with a lowest valuation of -R36.05 and an average of R-13.87, in the dummy-style valuations the corresponding figures are R27.50 for the lowest valuation and a far more *realistic* R31.04 for the bottom 15 average. The same too can be said of white wines. Of the lowest 15 linear valuations, six are negative, with the lowest at -R39.68. The average of these 15 is R2.23. By comparison the average for the lowest 15 dummy valuations is a more realist R18.29, and no negative valuations are derived. At the top end we see the same: the highest linear valuation is R100.34; markedly lower than its dummy equivalent: R165.09. Across the top fifteen linear and dummy valuations the trend is similar: linear top fifteen average: R97.00, versus the dummy average of R121.02.

3. In the case of both red and white wine datasets, while the relationship between value and the extent-of-mispricing is random in the linear version (see figures 4.17 and 4.19), the *extent* of scatter and dispersal becomes that much more *marked* in the dummy approach (see figures 4.18 and 4.20).
4. This leads to one final observation: when using the appropriate valuation techniques, mispricing opportunities can be identified for purchase across the entire spectrum of value – and not simply at lower levels. This final point serves to deconstruct the popular marketing myth, particularly in the wine industry, that value-for-money can be acquired only at lower levels of product value. This is patently not the case, as the list of premium value and high value-for-money wines featured in tables 4.8 serves to demonstrate.

INSERT TABLE 4.8 HERE

4. CONCLUSION

The results of a readership poll run by *WINE* magazine showed that the sequence of four deciding factors when buying a wine ran as follows: Value For Money: 46%, Varietal Preference 29%, Ratings 17%, and Loyalty 8%. The accompanying editorial noted that “*the good news for marketing types is that loyalty is not everything. You’re willing to try*”

something new – and especially if it's a wine that has scored a high rating!" (McDonald et al, 2005, 37). Of key relevance from this customer perspective is that value, and in particular value-for-money, is increasingly replacing the historic primacy of estate reputation in the lexicon of consumer product discernment.

In South Africa, and no doubt elsewhere, the challenge then is to develop models that compute and identify wines offering optimal value-for-money. This study of 2007 wines suggests that the dummy-styled approach does much to answer this challenge.

Such work is predicated on acknowledged consumer-facing market sources – that is the ongoing tasting record of popular wine critics. No bottle cues or supply side factors are accounted for other than those implicit in the (sighted) ratings themselves. The proposed model is thus styled upon quality and quality alone. Treating each wine on its individual merit, this study demonstrates the bias reducing effect of employing dummy variables instead of ordinary linear calibrations, thereby addressing the central flaw in the 2004 paper: that it could not adequately price wines of exceptional quality. So doing, this paper demonstrates that bargains can be acquired as much at the top end of the value (or quality) spectrum – as at the bottom, and so doing serves to corroborate the conclusions of Priilaid and van Rensburg's analogous study (2006) of red wine prices during the 2004 period.

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Candidate Variables						
1. Wine type (<i>Red</i> : cabernet sauvignon, merlot, shiraz, pinotage, pinot-noir, red blends; <i>White</i> : chardonnay, chenin blanc, sauvignon blanc, white blends).						
2. Wine quality assessed sighted						
a. star ratings treated as numeric data						
b. star ratings treated as descriptive, dummy variables.						
3. Wine quality assessed blind						
a. star ratings treated as numeric data.						
b. star ratings treated as descriptive, dummy variables.						

Table 3.1: Candidate variables explaining wine price.

<i>Varietals analysed</i>	% of national vineyard	Total Hectorage	Ranking
chenin blanc	18.75 %	19053	1
cabernet sauvignon	13.36 %	13572	2
shiraz	9.64 %	9794	4
chardonnay	7.80 %	7927	5
sauvignon Blanc	7.50 %	7661	6
merlot	6.83 %	6941	7
pinotage	6.39 %	6493	8
pinot noir	0.53 %	535	19

Table 3.2: Varietals under analysis. Note: white and red blends are also included in the study. (Adapted from Boom, 2006, 383-397). Blends aside, alone, the above eight varietals above constitute more than 70% of South Africa's national vineyard.

Platter Ratings for 2007 Wines												
Cultivar	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	SUM
cabernet sauvignon				1	3	7	8	40	41	16		116
merlot					6	4	23	38	27	8		106
pinotage				3		9	20	28	25	10		95
pinot noir					1	1	6	8	4	5		25
shiraz				1	2	8	37	65	65	34		212
red blends					11	21	43	100	111	56		342
chardonnay				2	1	5	22	33	55	18		136
chenin blanc		1	1	5	4	12	30	23	18	6		100
sauvignon blanc			1	3	4	7	15	45	56	20		151
white blends				2	6	6	19	17	15	10		75
		1	2	17	38	80	223	397	417	183		1358
WINE magazine Ratings for 2007 Wines												
Cultivar	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	SUM
cabernet sauvignon	1		7		9	27	38	21	13			116
merlot	6		19		24	23	19	10	5			106
pinotage	2		11		17	27	20	10	7	1		95
pinot noir	1		3		4	4	6	3	4			25
shiraz	1		15		41	47	66	21	17	4		212
red blends	11		21		57	68	92	50	41	1	1	342
chardonnay	1		4		27	34	45	15	10			136
chenin blanc	2		9		24	23	21	6	10	3	2	100
sauvignon blanc	1		10		33	43	36	15	12	1		151
white blends	0		4		17	13	10	17	11	3		75
	26		103		253	309	353	168	130	13	3	1358

Table 3.3: Number of wines assessed per varietal – as graded by *Platter* and *WINE* magazine star ratings, respectively.

REDS 2007	PRICE	WINE MAG	PLATTER
PRICE	1.00		

WINE MAG	0.25	1.00	
PLATTER	0.50	0.30	1.00
WHITES 2007	PRICE	WINE MAG	PLATTER
PRICE	1.00		
WINE MAG	0.39	1.00	
PLATTER	0.60	0.40	1.00

Table 4.1: Red and white wines 2007: correlation matrix.

Variable	Coefficient	t Statistic
First regression: <u>Linear Model for Blind (WINE Mag) assessments only</u> (Adj. R ² : 7.33%, n=896.)		
Constant	27.29	3.80
shiraz	20.29	3.35
cabernet sauvignon	6.94	1.22
merlot	7.94	1.49
pinot noir	35.99	2.52
red blends	22.66	3.87
WINE magazine stars	17.16	7.25
Second regression: <u>Linear Model for Sighted (Platter) assessments only</u> (Adj. R ² : 35.87%, n=896.)		
Constant	-109.54	-8.30
shiraz	13.31	2.50
cabernet sauvignon	2.84	0.57
merlot	2.98	0.64
pinot noir	33.13	2.75
red blends	16.62	3.39
Platter stars	51.87	13.99
Third regression: <u>Dummy Model for Blind (WINE Mag) assessments only</u> (Adj. R ² : 8.83%, n=896.)		
Constant	42.94	4.90
shiraz	20.56	3.49
cabernet sauvignon	6.41	1.13
merlot	6.40	1.20
pinot noir	34.25	2.38
red blends	21.64	3.73

WINE magazine 1 star	15.85	1.60
WINE magazine 2 stars	15.17	1.73
WINE magazine 2.5 stars	16.91	1.93
WINE magazine 3 stars	34.53	3.98
WINE magazine 3.5 stars	57.69	4.93
WINE magazine 4 stars	55.03	4.97
WINE magazine 4.5 stars	89.91	2.82
WINE magazine 5 stars	190.91	23.14
Fourth regression: <i>Dummy Model for Sighted (Platter) assessments only</i> (Adj. R ² : 33.15%, n=896.)		
Constant	38.54	6.10
shiraz	14.48	2.97
cabernet sauvignon	4.73	1.12
merlot	5.58	1.30
pinot noir	30.27	2.69
red blends	17.09	3.80
Platter 2 stars	-11.73	-1.52
Platter 2.5 stars	-6.21	-0.88
Platter 3 stars	7.31	1.00
Platter 3.5 stars	23.28	3.39
Platter 4 stars	44.73	6.38
Platter 4.5 stars	118.95	11.02

Table 4.2: Red wines 2007: estimated linear and dummy model regressions for blind and sighted metrics. Significant t-stat figures and their respective coefficients are cited in bold.

Variable	Coefficient	t Statistic
First regression: <u>Linear Model for Blind (WINE magazine) assessments only</u> (Adj. R ² : 22.59%, n=462.)		
Constant	0.67	0.11
chardonnay	27.71	7.07
sauvignon blanc	15.50	4.96
white blends	12.75	2.47
WINE magazine stars	15.86	6.41
Second regression: <u>Linear Model for Sighted (Platter) assessments only</u> (Adj. R ² : 38.91%, n=462.)		
Constant	-43.54	-6.06
chardonnay	15.51	4.19
sauvignon blanc	3.11	0.95
white blends	12.09	2.61
Platter stars	27.10	11.65
Third regression: <u>Dummy Model for Blind (WINE magazine) assessments only</u> (Adj. R ² : 28.13%, n=462.)		
Constant	45.26	2.71
chardonnay	32.26	8.80
sauvignon blanc	19.06	6.59
white blends	14.20	3.03
WINE magazine 1 star	-20.94	-1.23
WINE magazine 2 stars	-16.18	-0.96
WINE magazine 2.5 stars	-11.43	-0.67
WINE magazine 3 stars	-4.78	-0.28
WINE magazine 3.5 stars	7.18	0.41
WINE magazine 4 stars	20.91	1.18
WINE magazine 4.5 stars	66.51	1.95
WINE magazine 5 stars	92.24	1.35
Fourth regression: <u>Dummy Model for Sighted (Platter) assessments only</u> (Adj. R ² : 44.39%, n=462.)		
Constant	20.22	6.79
chardonnay	15.49	4.43
sauvignon blanc	2.40	0.77
white blends	11.87	2.78
Platter 0.5 stars	2.78	0.94

<i>Platter 1 star</i>	-3.91	-0.95
<i>Platter 2 stars</i>	-1.79	-0.44
<i>Platter 2.5 stars</i>	8.49	1.93
<i>Platter 3 stars</i>	9.16	3.16
<i>Platter 3.5 stars</i>	25.14	8.12
<i>Platter 4 stars</i>	45.48	12.69
<i>Platter 4.5 stars</i>	72.57	9.86

Table 4.3: White wines 2007: estimated linear and dummy model regressions for blind and sighted metrics. Significant t-stat figures and their respective coefficients are cited in bold.

	LINEAR MODEL	DUMMY MODEL
	Blind tastings only	
	First Regression	Third Regression
<i>WINE magazine Star 0 stars</i>	86% (11%)	-82% (142%)
<i>WINE magazine 1 star</i>	10% (59%)	-23% (78%)
<i>WINE magazine 2 stars</i>	-22% (52%)	-19% (51%)
<i>WINE magazine 2.5 stars</i>	-23% (46%)	-14% (42%)
<i>WINE magazine 3 stars</i>	-29% (60%)	-19% (54%)
<i>WINE magazine 3.5 stars</i>	-25% (58%)	-22% (56%)
<i>WINE magazine 4 stars</i>	-14% (50%)	-21% (53%)
<i>WINE magazine 4.5 stars</i>	-3% (76%)	-58% (119%)
<i>WINE magazine 5 stars</i>	-6% (101%)	-83% (174%)
Total avg. mispricing across data	-20% (55%)	-20% (56%)
	Sighted tastings only	
	Second Regression	Fourth Regression
<i>Platter 0.5 star</i>	230% (0%)	0% (0%)
<i>Platter 1 star</i>	197% (56%)	-9% (39%)
<i>Platter 1.5 star</i>	92% (26%)	-7% (34%)
<i>Platter 2 stars</i>	15% (59%)	-21% (75%)
<i>Platter 2.5 stars</i>	-4% (42%)	-19% (47%)

<i>Platter</i> 3 stars	-34% (40%)	-8% (33%)
<i>Platter</i> 3.5 stars	-22% (36%)	-9% (32%)
<i>Platter</i> 4 stars	-11% (34%)	-12% (34%)
<i>Platter</i> 4.5 stars	0% (32%)	-16% (37%)
Total avg. mispricing across data	-11% (46%)	-12% (37%)

Table 4.4: White wines 2007: average extent of percentage mispricing-per-star for each of the four preliminary regressions. (Standard deviations appear in brackets.)

Variable	Coefficient	t Statistic
<i>Linear Model for Blind (Wine magazine) and Sighted (Platter) assessments (Adj. R²: 26.73%, n=896.)</i>		
Constant	-117.59	-8.69
shiraz	12.62	2.41
cabernet sauvignon	0.93	0.19
merlot	5.17	1.12
pinot noir	32.70	2.72
red blends	15.75	3.28
<i>Platter</i>	48.78	13.34
WINE magazine	7.43	3.59
<i>Dummy Model for Blind (Wine magazine) and Sighted (Platter) assessments (Adj. R²: 33.81%, n=896.)</i>		
Constant	33.05	3.22
shiraz	14.27	2.98
cabernet sauvignon	2.23	0.52
merlot	6.42	1.48
pinot noir	28.64	2.54
red blends	15.32	3.38
<i>Platter</i> 2 stars	-6.24	-0.64
<i>Platter</i> 2.5 stars	-1.38	-0.15
<i>Platter</i> 3 stars	10.08	1.11
<i>Platter</i> 3.5 stars	24.13	2.78
<i>Platter</i> 4 stars	44.68	5.00
<i>Platter</i> 4.5 stars	115.60	9.50

WINE magazine 1 star	-0.59	-0.07
WINE magazine 2 star	-1.54	-0.23
WINE magazine 2. 5 stars	0.78	0.12
WINE magazine 3 stars	7.36	1.10
WINE magazine 3.5 stars	17.57	1.94
WINE magazine 4 stars	17.28	1.99
WINE magazine 4.5 stars	1.27	0.04
WINE magazine 5 stars	91.53	7.81

Table 4.5: All red wines 2007: the final linear and dummy model regressions for all wine ratings. Significant t-stat figures and their respective coefficients are cited in bold.

Variable	Coefficient	t Statistic
<i>Linear Model for Blind (WINE) and Sighted (Platter) assessments (Adj. R²: 41.96%, n=462.)</i>		
Constant	-51.41	-5.97
chardonnay	16.59	4.72
sauvignon blanc	4.74	1.59
white blends	10.70	2.44
WINE magazine stars	23.47	12.83
Platter	7.39	3.56
<i>Dummy Model for Blind (WINE) and Sighted (Platter) assessments (Adj. R²: 50.48%, n=462.)</i>		
Constant	52.90	2.14
chardonnay	19.81	6.56
sauvignon blanc	6.93	2.66
white blends	12.64	3.46
WINE magazine 1 star	-38.61	-1.56
WINE magazine 2 star	-36.11	-1.46
WINE magazine 2. 5 stars	-34.27	-1.39
WINE magazine 3 stars	-29.94	-1.21
WINE magazine 3.5 stars	-29.74	-1.19
WINE magazine 4 stars	-19.57	-0.78
WINE magazine 4.5 stars	15.08	0.42

<i>WINE</i> magazine 5 stars	50.20	0.95
<i>Platter</i> 0.5 star	-29.90	-1.21
<i>Platter</i> 1 star	-21.73	-1.16
<i>Platter</i> 2 stars	-0.73	-0.18
<i>Platter</i> 2.5 stars	6.95	2.03
<i>Platter</i> 3 stars	6.83	2.33
<i>Platter</i> 3.5 stars	21.30	6.96
<i>Platter</i> 4 stars	38.70	10.84
<i>Platter</i> 4.5 stars	61.98	11.00

Table 4.6: White wines 2007: the final linear and dummy model regressions for all wine ratings. Significant t-stat figures and their respective coefficients are cited in bold.

Price Segment		Linear Model	Dummy Model	Percentage Change
<i>RED WINES</i>				
Less than R50.00 (n=202, avg. price: R38.57)	Average Valuation	R58.44	R60.70	4%
	Value Std. deviation	R31.33	R17.17	-43%
R50-R99.99 (n=449, avg. price=R71.69)	Average Valuation	R88.44	R84.05	-5%
	Value Std. deviation	R27.77	R29.75	7%
R100 – R149.99 (n=144, avg. price=R118.05)	Average Valuation	R108.11	105.26	-3%
	Value Std. deviation	R22.06	R35.57	61%
R150 – R199.99 (n=54, avg. price=R164.26)	Average Valuation	R122.51	R139.01	13%
	Value Std. deviation	R20.04	R39.77	97%
More than R120 (n=47, avg. price=R297.13)	Average Valuation	R130.07	R152.16	17%
	Value Std. deviation	R20.54	R40.83	99%

	deviation			
<i>WHITE WINES</i>				
Less than R50.00 (n=210, avg. price=R33.92)	Average Valuation	R43.21	R41.31	-4%
	Value Std. deviation	R20.32	R16.67	-18%
R50-R99.99 (n=208, avg. price=R67.37)	Average Valuation	R69.37	R69.13	0%
	Value Std. deviation	R12.96	R17.97	39%
R100 – R149.99 (n=33, avg. price=R116.21)	Average Valuation	R79.47	R86.38	9%
	Value Std. deviation	R14.20	R18.17	28%
R150 – R199.99 (n=6, avg. price=R163.00)	Average Valuation	R92.98	R105.12	13%
	Value Std. deviation	R6.70	R22.82	241%
More than R120 (n=5, avg. price=R239.00)	Average Valuation	R92.32	R121.57	32%
	Value Std. deviation	R8.99	R33.68	275%

Table 4.7: Red and white wines 2007: final linear and dummy model regressions for all wine ratings.

Wine label	2007 Price	WINE score	Platter score	Linear valuation	Dummy valuation	Linear model: extent of mispricing	percentage of mispricing
<i>RED WINES</i>							
The Chocolate Block Boekenhoutskloof 2005	R 120.00	3.5	4.5	R 143.70	R 181.53	- 19.75%	- 51.28%
Warwick Trilogy 2004	R 135.00	3.5	4.5	R 143.70	R 181.53	- -6.44%	- 34.47%
Grangehurst Nikela 2001	R 140.00	3.5	4.5	R 143.70	R 181.53	- -2.64%	- 29.67%
Kaapzicht Steytler Vision Cape Blend 2003	R 150.00	3.5	4.5	R 143.70	R 181.53	- 4.20%	- 21.02%
Rustenberg John X Merriman 2004	R 115.00	4	4.5	R 147.42	R 181.25	- 28.19%	- 57.61%
Stellenzicht Syrah 2002	R 160.00	3.5	4.5	R 140.56	R 180.48	- 12.15%	- 12.80%
Grangehurst Nikela 2000	R 110.00	3	4.5	R 139.98	R 171.33	- 27.26%	- 55.75%
Delheim Grand Reserve 2004	R 145.00	3	4.5	R 139.98	R 171.33	- 3.46%	- 18.16%
Saronsberg Full Circle 2005	R 150.00	3	4.5	R 139.98	R 171.33	- 6.68%	- 14.22%
Saxenburg Private Collection Shiraz 2004	R 100.00	3	4.5	R 136.85	R 170.27	- 36.85%	- 70.27%
<i>WHITES WINES</i>							
Cape Point Sauvignon Blanc 2006	110.00	4.5	4.5	92.18	136.88	16.20%	- 24.43%
Paul Cluver Chardonnay 2005	75.00	4	4.5	100.34	115.11	- 33.79%	- 53.48%
Sumaridge Chardonnay	70.00	4	4.5	100.34	115.11	-	-

2006						43.34%	64.44%
Scali Blanc 2006	100.00	4	4.5	94.45	107.94	5.55%	-7.94%
Hermanuspietersfontein Die Bartho 2006	99.95	4	4.5	94.45	107.94	5.51%	-7.99%
Bellingham The Maverick Chenin Blanc 2005	90.00	4.5	4	75.71	106.67	15.88%	- 18.53%
Chamonix Reserve Chardonnay 2006	100.00	3.5	4.5	96.64	104.95	3.36%	-4.95%
Woolworths Danie de Wet Chardonnay Rsrv 2003	89.95	3	4.5	92.95	104.74	-3.34%	- 16.45%
Oak Valley Chardonnay 2006	85.00	3	4.5	92.95	104.74	-9.35%	- 23.23%
Waterford Chardonnay 2006	75.00	3	4.5	92.95	104.74	- 23.93%	- 39.66%

Table 4.8: Red and white wines 2007: twenty high priced wines that offer exceptional value-for-money.

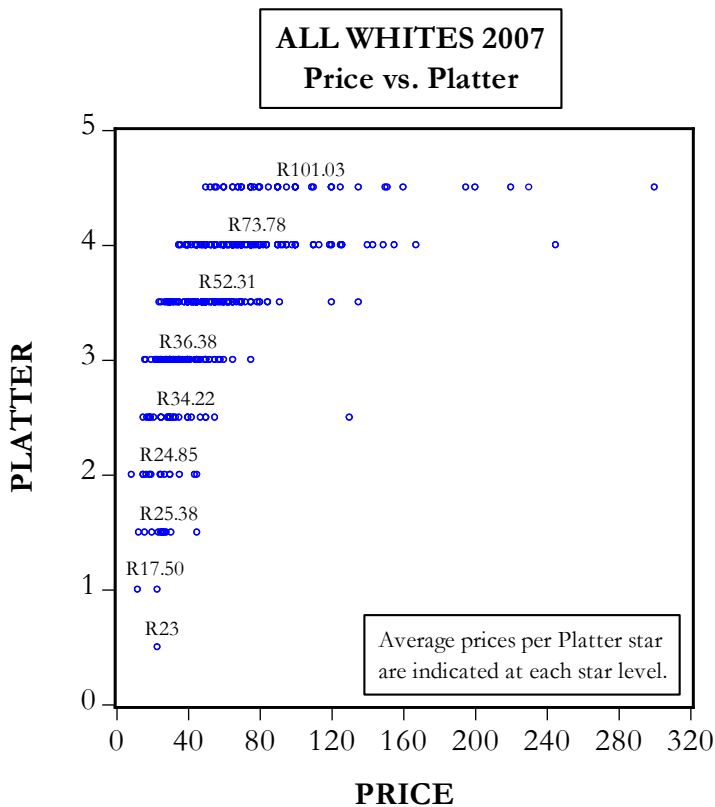


Figure 4.1: White wines 2007: wine prices (in Rands) per *Platter* star conferred.

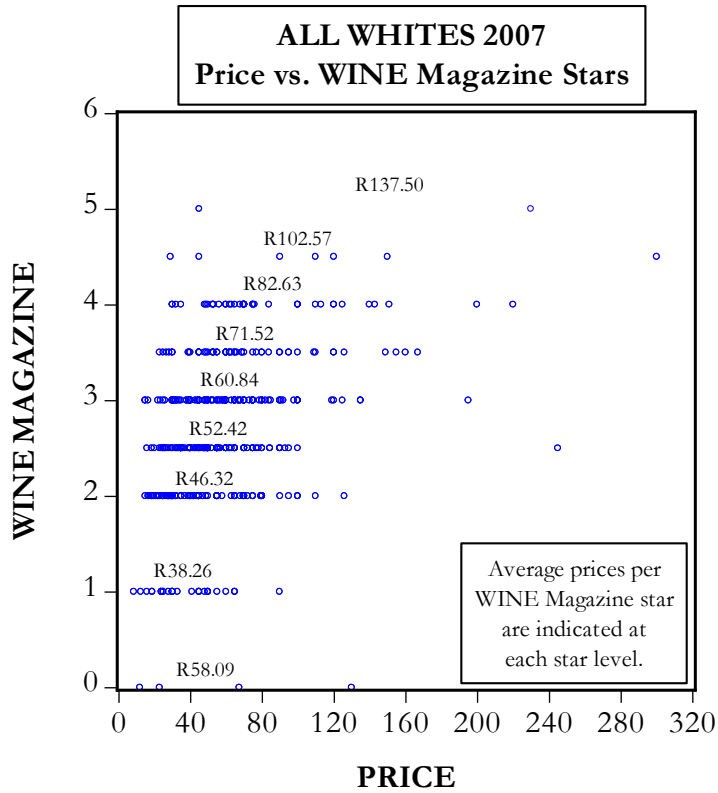


Figure 4.2: White wines 2007: prices (in Rands) per *WINE* star conferred.

ALL WHITES 2007
Extent of Mispricing vs. WINE Magazine Ratings
Linear Model Employed

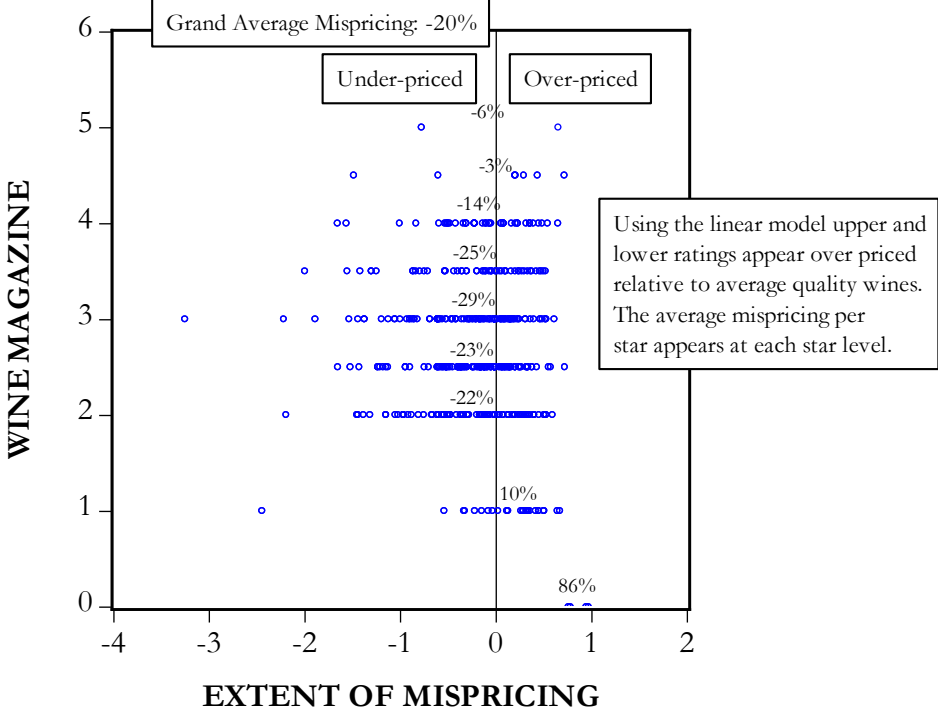


Figure 4.3: White wines 2007: the extent of mispricing solely on *WINE* magazine ratings as per the linear model. (This is the first of the four preliminary regressions.)

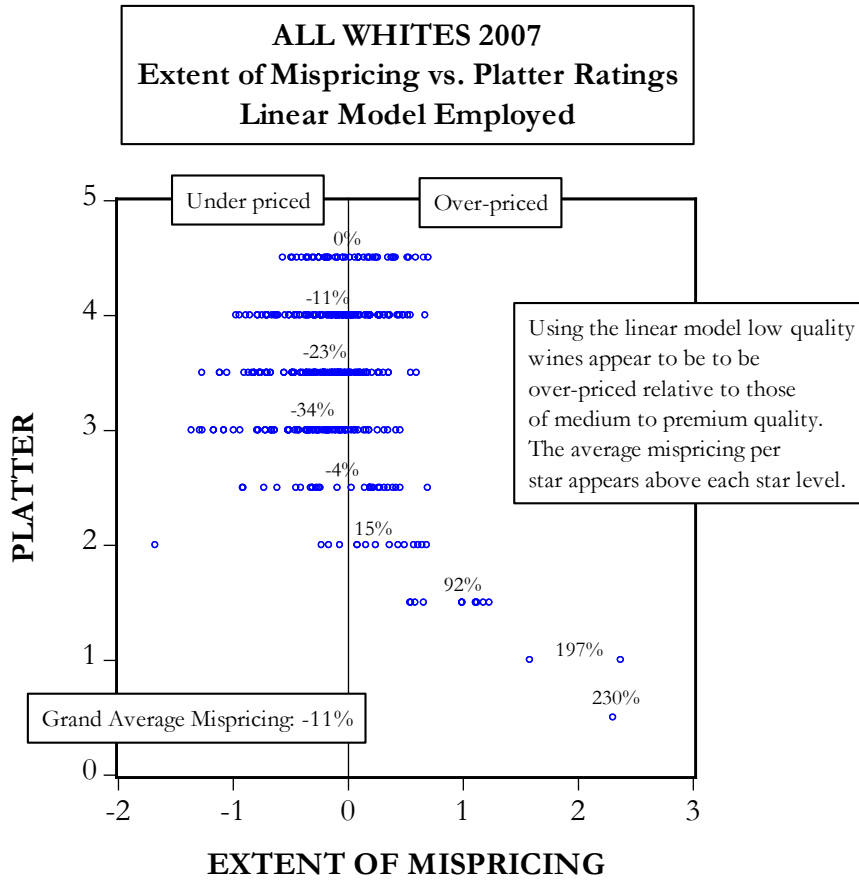


Figure 4.4: White wines 2007: the extent of mispricing solely on *Platter* ratings as per the linear model. (This is the second of the four preliminary regressions.)

ALL WHITES 2007
Extent of Mispricing vs. WINE Magazine Ratings
Dummy Model Employed

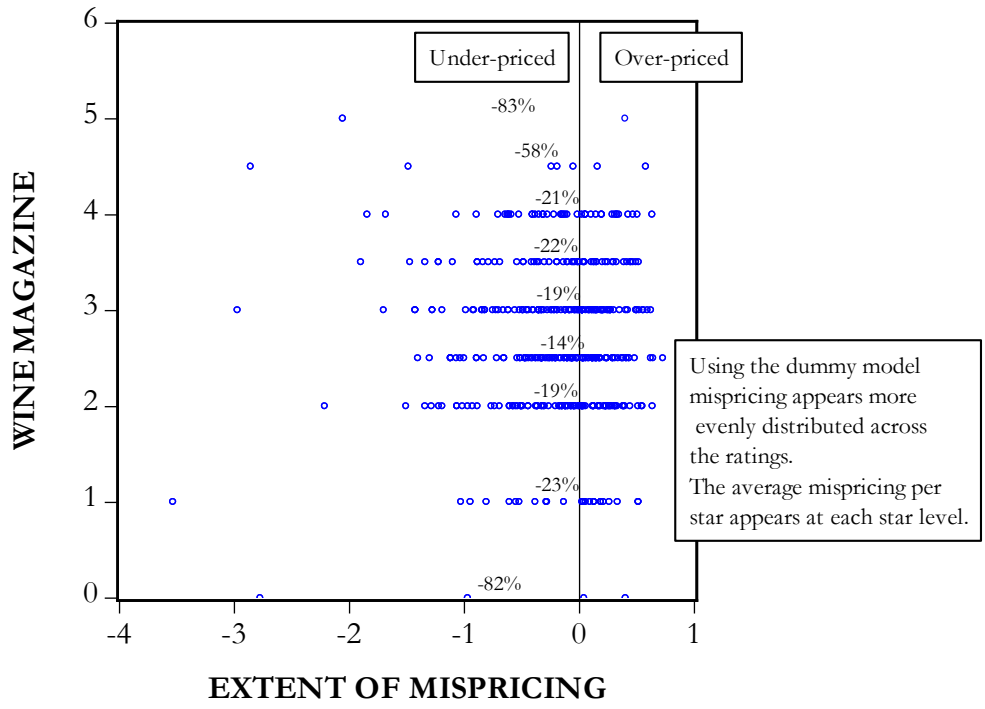


Figure 4.5: White wines 2007: the extent of mispricing solely on *WINE* magazine ratings as per the dummy model. (This is the third of the four preliminary regressions.)

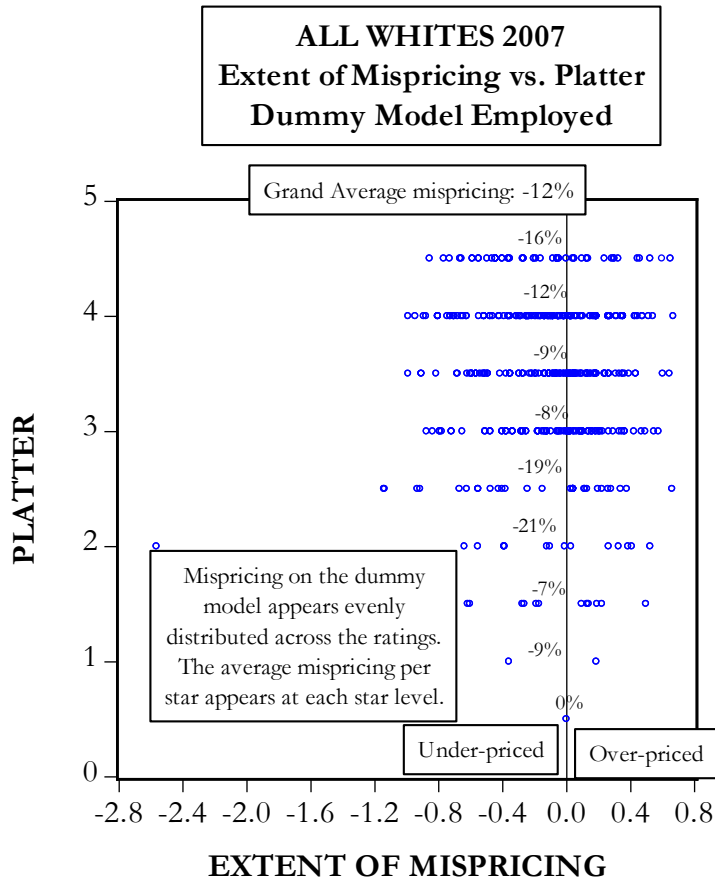


Figure 4.6: White wines 2007: the extent of mispricing solely on *Platter* ratings as per the dummy model. (This is the last of the four preliminary regressions.)

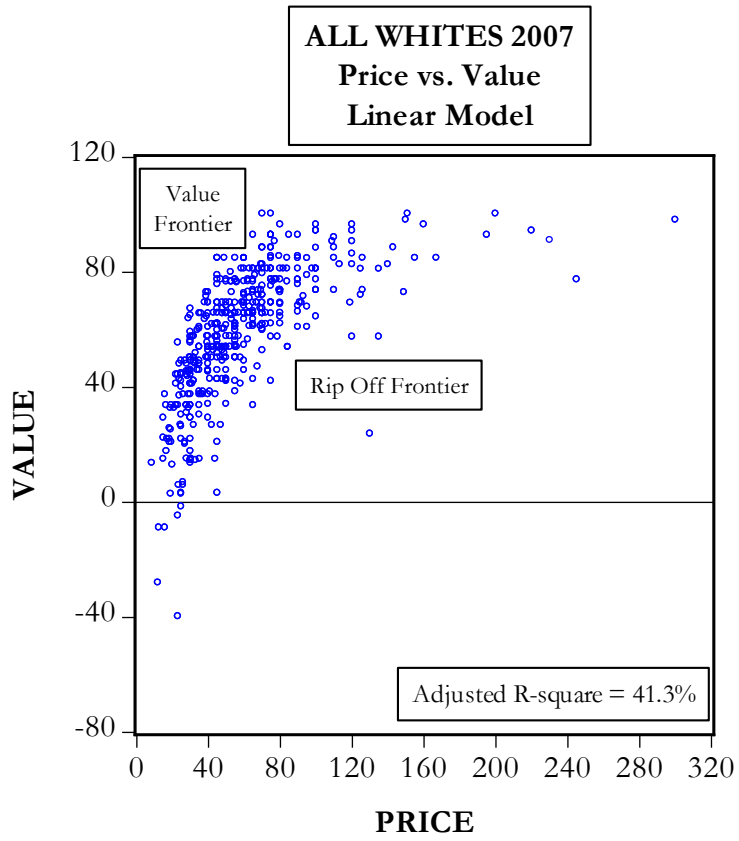


Figure 4.7: White wines 2007: price vs. value: the final linear model.

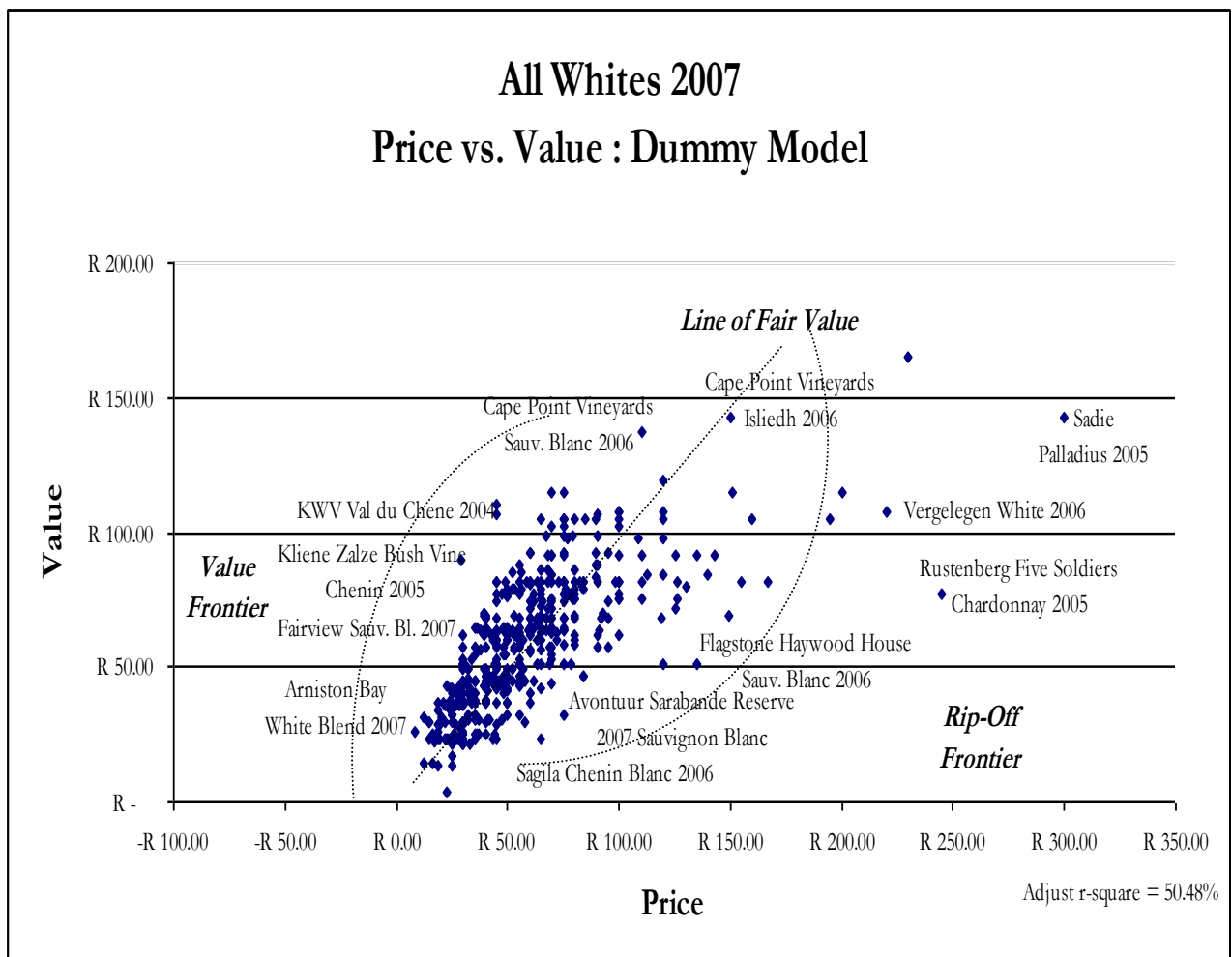


Figure 4.8: White wines 2007: price versus value (in Rands): the final dummy-styled model

Using a non-linear specification, statistically significant variables include all varietals as well as *Platter* stars 2.5 to 4.5. Once more wines offering the most value-for-money can be found on the “Value Frontier”, and include Arniston Bay (a white blend), Fairview’s sauvignon blanc, Kleine Zalze’s bush vine chenin, the KVV Val Du Chêne, and the Cape Point Vineyards sauvignon blanc. Similarly, wines offering the least value-for-money accrue on or about the so-called “Rip-Off Frontier”. Such wines include the Sagila chenin blanc, the Avontuur “Sarabande” reserve sauvignon blanc, the “Haywood House” sauvignon blanc from Flagstone, the Rustenberg “Five Soldiers” chardonnay and the Vergelegen “White”. The “Line of Fair Value” falls between these two extremes and showcases wines (such as the “Isliedh” from Cape Point Vineyards) that are fairly priced for the quality and hence value on offer. In contrast to the linear multi-factor model we note (1) the absence of any negative valuations, and 30 wines valued at over R100. In the linear construction only four wines are valued at over R100.

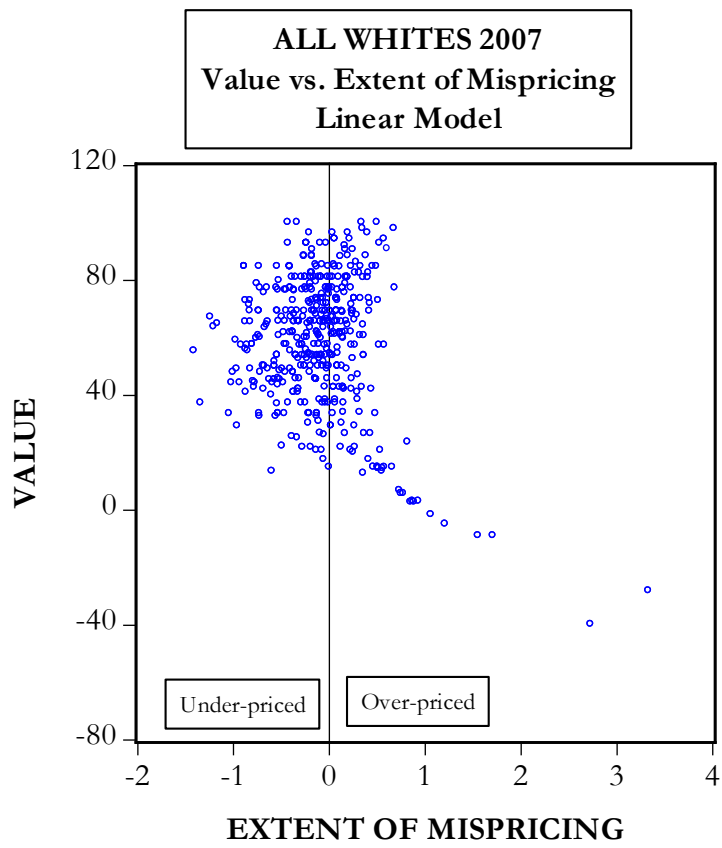


Figure 4.9: White wines 2007: extent of mispricing vs. value: the final linear model.

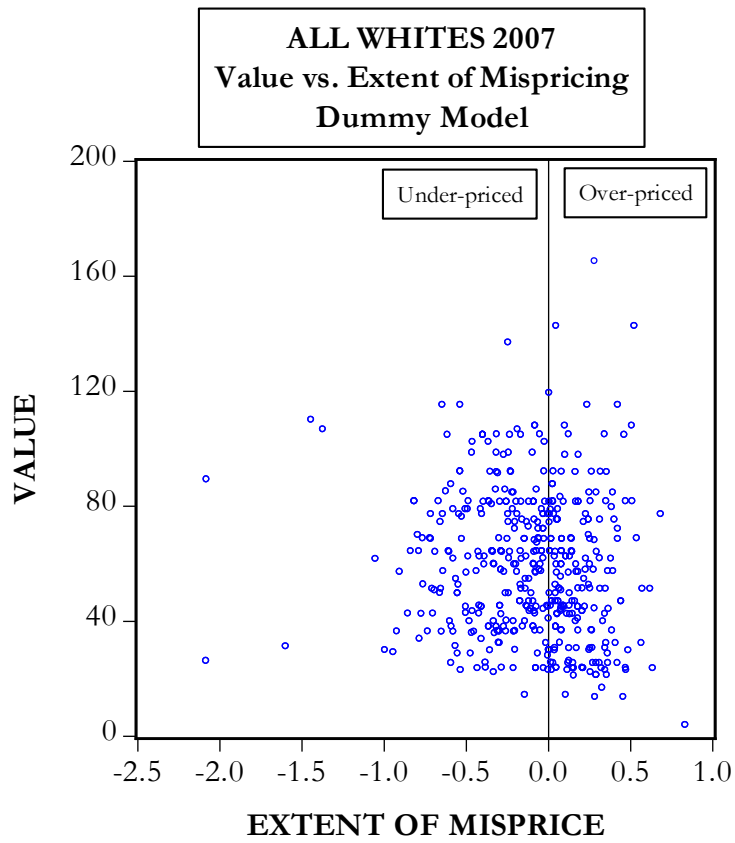


Figure 4.10: White wines 2007: extent of mispricing vs. value: the final dummy-styled model.

THE IMPACT OF ASSEMBLY LINE BALANCING WITHIN THE CLOTHING INDUSTRY IN SOUTH AFRICA

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Keywords: line balancing; clothing industry, process improvement; time management

ABSTRACT

Garment manufacturing is a complicated process that involves numerous machines with different technical specifications, hundreds of employees and thousands of bundles of sub-assembled garments of different styles and sizes being produced simultaneously. The design of the production lines is an important aspect for efficient production. The determination of the standard time value for each task is a critical component in the line balancing process which is obtained through the application of work study principles. This may be done using various work measurement techniques such as predetermined motion time standards (PMTS) and work-study methodology. The clothing industry has lost approximately 67000 jobs in the past three years due to a lack of performance and efficiency and line balancing methodology could improve the status quo in the clothing industry. Qualitative results of the implementation of line balancing and its relative experiences at a South African clothing manufacturer are presented through a case history.

Key words: line balancing; clothing industry; process improvement

INTRODUCTION

The SA clothing industry shed over 67 000 jobs in the past three years (Bell, 2006). There is a possibility that more jobs may be shed in Durban (Kwa-Zulu Natal). The Alexander Report mentions that between July 2006 and May 2007 there was a drop of 5275 in employment figures (Palmi, 2007). The cut, make and trim (CMT) industries find it difficult to negotiate

wage increases as production costs escalate beyond proportion. If the lay off of workers continues in the clothing industry, it would increase the unemployment rate, thus impacting on the economy of South Africa.

The Chinese clothing and textile industry has approximately 15 million workers and 300,000 factories. This means low cost garments for the global consumer but on the other hand pain and suffering as millions of jobs are lost worldwide (Paton and Bisseker, 2005).

China's appearance as a global player in international trade is undoubtedly threatening world markets. World market reporters calculated that the Chinese share of the global market could rise from 7% to 25% in two decades (Mamoepa, 2006). In order to survive this holocaust of imports in the global economy, manufacturers need to adopt the framework of process improvement practices to enhance their competitive status (Edwards and Golub, 2002).

Chinese business related infiltration into South Africa and the rest of the world is focused on expansion. The momentum and assertiveness with which the Chinese organisations are accessing world markets is a matter of concern. Chinese organisations are eliminating competition of conventional suppliers of manufactured products in South Africa and the rest of the world markets through a focused competitive strategy based overwhelmingly on prices (Mamoepa, 2006).

Manufacturers that find it impossible to compete on garment price move their production facilities to non-metropolitan areas in South Africa while others move out of SA. The justification for relocation primarily centred on labour costs. Clothing manufacturers relocated to areas such as Qwa-Qwa, Isithebe, Lesotho and Swaziland to name but a few locations. The enforcement of labour rates by the bargaining council cause manufacturers to either relocate, operate as an unregistered organisation or shut down their plants as they fail to comply with bargaining council requirements (Krige, 2007).

OBJECTIVES

- to highlight the dilemma facing the clothing industry in South Africa
- to make recommendations that the clothing industry could survive its current fate through the implementation of process improvement methodologies.
- to highlight the experiences during the implementation of line balancing as a means of performance improvement within the context of the clothing industry.

PROBLEM INVESTIGATED

The clothing industry in South Africa faces a major challenge in terms of its survival due to numerous inefficiencies and this paper was developed with a view of improving the status quo within the clothing industry through the implementation of line balancing methodology.

RESEARCH OBJECTIVES

To highlight the plight of clothing manufacturers and create an understanding that line balancing could improve the performance of the industry.

LITERATURE REVIEW

The clothing supply chain continues to influence industrialisation throughout the developing countries. Thus, consumer industries are struggling to maintain their share of the global market in terms of fashion design, production and distribution throughout the supply chain (Byrne and Rigby, 2000).

Kahn (1998) mentioned the significance of implementing a competitive strategy that would enhance manufacturing capabilities in order to compete in the global economy. A competitive strategy would cultivate strengths that could be used as a weapon against competing organisations.

The dimensions of competition vary in its context and have been argued extensively. Organisations implement priorities according to their needs. Porter (1996) categorised competitive advantage in terms of price; flexibility; quality and dependability. Ward and Durray (2000) identified five different dimensions namely price; quality; dependability; product flexibility; and volume flexibility.

Chan et al (2002) proposed a combined list of competitive priorities, including plant and equipment, production planning and control, labour and staffing, product design and engineering, and organisation and management.

Hill (2000) argued that organisations should use criteria that win the orders. He focussed on price, delivery, quality, product design and variety. Hill also mentioned performance as qualifying criteria in an organisations quest for service delivery.

Krajewski and Ritzman (1996) mentioned “a more detailed list by differentiating four different aspects namely, cost; quality; time; and flexibility. Their list then included low-cost

operations, high-performance design, consistent quality, fast delivery time, on-time delivery, development speed, customisation, and volume flexibility.”

Stevenson (2006) mentioned that an organisation can compete on three major issues namely:

- cost leadership – competing on the basis of price;
- differentiation – a unique product that is valued by customers; and
- focus - a niche market for its products developed on cost and differentiation strategy.

The use of technology in the clothing and textile industry is always a major factor in its competitive struggle. It is controlled by the established industries in Japan, Europe and the USA. However, technology is not the only way to achieve competitive advantage, but the understanding of systems methodology based on cost and productivity (Kilduff, 2000). Information technology also plays a major role in processing information using real time technology, thus facilitating communication and feedback by the touch of a button. The information technology explosion is shaping business operations in all its contexts (Forza and Vinelli, 2000). Although line balancing could be done manually, it would be advantageous to implement line balancing methodology using appropriate software. This leads to a discussion in experiences in the clothing industry through a case study.

RESEARCH METHODOLOGY

The research methodology employed in this paper is qualitative and exploratory in nature making use of applicable literature and an appropriate case study. This is in line with what is suggested by Cooper and Schindler (2006). The research highlights some of the issues affecting the SA clothing industry and includes a review of secondary data including existing literature and documents on the industry from Clofed, Texfed, relevant research reports from the DTI and NEPAD in South Africa, as well as relevant journal articles such as in the International Journal of Clothing Science and Technology and Operations Management. Qualitative results of the case study are presented through the experiences during the implementation of line balancing.

SURVEY EVIDENCE THROUGH CASE STUDY APPLICATION

Plant history and context

A qualitative approach using a case study is used in the implementation of line balancing methodology. This production facility manufactures men’s and ladies fashion wear and operates in a small town in Kwa-Zulu Natal. Currently, approximately 300 people work in the

plant. The factory opened in 1970 and did not implement modern technology due to financial constraints. The facility had 16 supervisors and a plant manager.

The plant manager agreed to perform a pilot project on line balancing to determine its effectiveness. The sewing department used to the bundle system of manufacture. Work is passed to sewing machines in bundles of cut pieces. The number of cut parts in the bundle may vary according to weight or the complexity of operations required, but the principle remains the same: the operator unties the bundles, sews the cut parts together, re-ties the bundle, processes the work ticket and places the bundle into a bin or on a transporter system (a U shaped manual conveyor). The bundle then goes to another machinist who repeats a similar sequence; a bundle may be tied and untied several times before it completes its lengthy journey. Units move from operator to operator for completion of the respective operation. The bundle production system is a prominent production system used in the clothing industry. Manufacturers use it as a “buffer feeder” and fail to implement process improvement techniques to enhance production flow. Bundles of work-in-progress are found at workstations and sub-assemblies.

The plant followed conventional management practices before the 1980's but started changing as new management came on board. There was very little interaction among employees and management and there was an autocratic style of management.

Before the year 2000 the production facility was accustomed to lot sizes of between 2000 and 10000 units per order. Currently, there are lot sizes of approximately 100 units per order. The garments were not as complex in construction as the ones received currently. The factory was “flooded” with high lots of work-in-process throughout the plant. Employees who were loyal and employed for the last 30 years said that the environment in which they worked was hostile and they did the same operation for several years. It is important to note that there was no process improvement methodologies implemented at this organisation. The problems faced by clothing producers are summarised below:

- “Throughput time per unit: The time to complete one unit of production vs. the time to complete the order.
- Inventory between processes: used as buffer stock, machine breakdowns, line balancing. It may extend completion time.
- Critical paths: need to be arranged in parallel or in serial. This could affect the production process.
- Bottleneck operations: need identification for action.

- Plant utilisation: estimates effective use of resources.
- Minimum order size: affects the production process in terms of set-up costs and has a bearing on cost per unit.
- Change-over/setup: the loss of production when there is a style change.
- Rejects and repairs: evaluates capacity lost through repairs and costs lost through rejects” (Adewole, 2005).

Implementation of line balancing

Line balancing is the distribution of work on the line in such a way that all machinists obtain an equal amount of work in terms of time value. All workers should be productive during the day and production should flow smoothly, thereby achieving planned targets. The objective is to accurately delegate workers to the various operations required to complete the product based on their operational skills and to maximise productivity and delivery as per the planned targets.

One of the major oversights on the part of management is that they do not indicate the link between labour costing, order scheduling, line balancing and control to the line staff. Line balancing has 2 stages:

- Pre-planning
- Control

Both stages are inter-complementary and extremely important.

Preplanning for line balancing

Pre-Planning: Planning includes theoretical calculations & assumptions and is generally guided by past practical experience (and in most cases reliant on the memory of the supervisor). It takes into account operation complexities, machinery and productivity constraints.

Historically the method of allocating workers and operations was based purely on a 1 machinist to 1 operation basis. When bottlenecks were experienced, additional labour was allocated to minimise the constraint. Although this achieved the desired effect, labour utilisation was sacrificed. Thus, the productivity of the line was poor, and with lack of measurement practices, there was no factual information to address the situation.

Supervisors used under-balanced workers for the preparation of the next order which was not required and thus over-stocked work in progress. The resultant effect was the production of products under stressful conditions for the workforce.

In order to address this situation, an operation bulletin was drawn up during the garment costing stage using pre-determined motion time studies such as GSD (general sewing data) or synthesis, indicating the sequence of operations, necessary machinery and equipment. Just before production could commence the operator allocation bulletin was handed to the supervisor for the allocation of operations. Follow-up procedures were adopted to verify the operation bulletin using work-study principles. Discrepancies were ratified and kept on record for future consultation. The follow-up is often related to forceful methods of target achievement and often unfair to workers allocated to critical operations. This causes discontentment among the workforce and leads to high labour absenteeism and labour turnover, with necessary skills being lost.

Where standard minute values are available, the balancing of the line becomes simple and can be completed via a simple spreadsheet exercise on a computer. This method is used by the proactive individuals who realise that one has to drive the balance rather than let it drive the individual.

Accurate worker to operation ratios were established based on time value expressed as SMV (standard time value). The results reflected that some workers were required for a full day while others were required for only a portion of the day to complete the tasks required. This entails the reliance on the number of different skills possessed by every worker and the ability of the supervisor to optimize the use of these skills which usually manifests itself in the “control” function of line balancing.

Monitoring and controlling the line

Control initially begins with the initial line set up and daily monitoring of operator efficiencies. It includes a thorough knowledge of worker skills and levels of efficiency and can be made available via an updated skills matrix. With a proper understanding of worker skills it is possible to make reliable decisions about operation combinations that would minimize equipment and labour resource requirements.

Thorough planning enhances the control function. A skilled supervisor has to have the knowledge of the appropriate levels of work-in-progress, an analysis of current machinery and its operational features, knowledge of replacement workers in the event of absenteeism

or poor skills and full control on the quality of work to be produced. This is often the most difficult part of line balancing as it desires the knowledge, skills and experience of a person that is proficient in the clothing manufacturing industry.

Exploratory information has revealed that supervision is a major problem in the clothing industry. There is a lack of logical and common sense thinking and weakness in mathematical judgement. Supervisors rarely have the ability to foresee problems and are often reactionary, hence the term “fire-fighters.” In most cases the supervisor is the supplier of work and the other term with which supervisors are called are “glorified service-hands.” Observation skills, re-planning and adaptation skills are not used until the very last minute until the crisis arises.

In the process of controlling the production of each operator by recording outputs, it is common to view operations as requiring one worker or half a worker or 1 and half worker. It is important for supervisors to think in terms of time, that is, if a worker is required on an operation for the full day then it is for 60 minutes every hour, and if only half a worker is required then the worker should only spends half an hour on the job to achieve the required target. This is where most supervisors fail at their line balancing activity. They do not actually control the halves, or less than halves.

Management should be guiding the supervisor to an extent in which they can pre-plan this information so that supervisory control can improve. This would most certainly lead to improved line balancing.

An exercise was undertaken to highlight line balancing on a night wear sewing line. The line balance exercise was completed on a simple and regular style with consideration given to controlling periods of 10 minutes. Each operation was studied using stop watch time study methodology. A 12.5% increase in production was achieved with outputs per hour rising from 120 units per hour to 135 units per hour. The in-line and off-line efficiencies were accurate for the first time in 15 years of efficiency control. The manager, supervisor and worker morale improved the team spirit of the line.

The effect of line balancing

The following is a before and after example to illustrate the effect of line balancing on a clothing production line. It is important to review the efficiency expectancy, operation output and total output differences for the same style using the same number of workers.

Table 1.Full worker allocation to each operation

VBCS April 28 2010

Line Balance Report

Order: 1111

ID	Operation	Machine	SMV	Theory Bal	Round Off	Output	Efficiency
0	Attach Label	SNLS	0.095	0.22	1	631	18.23%
1	Join 1st Shoulder	SNLS	0.32	0.75	1	187	61.5%
2	Attach Neck Binding	3TFL	0.31	0.73	1	193	59.59%
3	Join 2nd Shoulder	5TOL	0.28	0.66	1	214	53.74%
4	Tack Neck	SNLS	0.19	0.45	1	315	36.51%
5	Attach Sleeves	5TOL	1.51	3.55	4	158	72.78%
6	Join Sideseams	5TOL	0.96	2.26	2	125	92%
7	Hem Bottom	3TFL	0.49	1.15	1	122	94.26%
8	Hem Sleeves	3TFL	0.52	1.22	1	115	100%
Total SMV = 4.68		Number of Operators = 11		Line Balance Efficiency = 81.56%			
Theoretical Output = 141		Practical Output = 115					

Table 2.Operators balances to the nearest 15minute period

VBCS April 28 2010

Line Balance Report

Order: 1111

ID	Operation	Machine	SMV	Theory Bal	Round Off	Output	Efficiency
0	Attach Label	SNLS	0.095	0.22	0.25	157	88.54%
1	Join 1st Shoulder	SNLS	0.32	0.75	0.75	140	99.29%
2	Attach Neck Binding	3TFL	0.31	0.73	0.75	145	95.86%
3	Join 2nd Shoulder	5TOL	0.28	0.66	0.75	160	86.88%
4	Tack Neck	SNLS	0.19	0.45	0.5	157	88.54%
5	Attach Sleeves	5TOL	1.51	3.55	3.5	139	100%
6	Join Sideseams	5TOL	0.96	2.26	2.25	140	99.29%
7	Hem Bottom	3TFL	0.49	1.15	1.25	153	90.85%
8	Hem Sleeves	3TFL	0.52	1.22	1.25	144	96.53%
Total SMV = 4.68		Number of Operators = 11		Line Balance Efficiency = 98.58%			
Theoretical Output = 141		Practical Output = 139					

It is imperative to note that should an operation require an operator for a 15 minute period to complete an hour's production, as defined by the line balance, the operator needs to be allocated another task on the line. Therefore, resource utilisation improves, with the optimisation of productivity and efficiency. This would enable the industry to improve their competitive status, quality, price and delivery dates.

OTHER ORGANISATIONS THAT EXPERIENCED IMPROVEMENTS

ORGANISATION A

This organisation employed 350 people and manufactures men's trousers. One line was chosen with 45 operators. The researcher evaluated the current status of the production line and observed the following:

- lack of performance standards;
- lack of line balancing;
- inefficient flow of materials;
- machinists waiting for work;
- inefficient work layout and ergonomics.

The output averaged 80 units per hour. The researcher interviewed management and the machinists to inform them of the current status. With the application of work study principles the researcher changed the following:

- changed the method of handling the garment with ergonomics in mind
- improved the flow of work
- balanced the operations
- eliminated waiting time
- set time standards for each operation

The production output performance improved to an average of 145 units per hour. This was an efficiency improvement of 57% within 3 weeks.

ORGANISATION B

This organisation employed 100 people for the manufacture of shoulder pads as trims for the clothing industry. The managing director requested an evaluation of the plant and the researcher was willing to conduct the evaluation. The organisation produced 80 pairs of shoulder pads per hour.

The researcher found the following inefficiencies:

- lack of time standards
- lack of performance management
- poor work methods

- inefficient flow of materials
- poor work organization
- lack of space and inventory stored “all over the place”
- lack of motivation and poor leadership
- lack of line balancing
- poor environmental conditions with insufficient lighting and poor air circulation

The researcher addressed the above issues through the application of work study principles and achieved an output of 150 pairs of shoulder pads per hour.

Findings of the survey conducted show that clothing manufacturers continue to operate in an unenlightened environment where barriers between employees and employers exist. The larger clothing organisations, both retailers and manufacturers dominate the sector and continue to eliminate competitors (Ramdass, 2009).

FINDINGS

Management commitment

Any change in the organisation stems from top management. Commitment from management drives the process of change and nothing can be achieved if management does not support the initiative. Once management gives their approval any change is possible, but employees need to understand and support the changes for it to be successful.

Management realised that in order to counteract the threat of imports they would try out the team-working concept although employees wished for “the good old days.” They could not afford huge piles of inventory on the machine floor.

Employees were delighted that the plant manager supported the initiative and frequently visited to find out how they were performing. An employee of the team briefly summarized how he felt and mentioned that any project has to have the support of management and the acceptance from employees for it to be successful. The managing director of the organisation initiated the process of change as funding in terms of labour is involved. Support from management, especially in terms of funding is important for a project of this nature.

The planning, organising, leading and controlling of the project are important as it would benefit the organisation over a period of time. The clothing industry is in need of radical change that would be able to counteract the competition faced. Employees were thankful that they had commitment and the necessary expertise from the management team.

Education and training

A number of training sessions were held with the team of employees to provide orientation with the objectives of the project. Employees held discussions regarding their concerns so that everybody understood their role in the project. The researcher explained that it was important for employees to understand the basic principles under which businesses operate, and that the industry was under threat due to globalisation. It was explained that the objectives of the project was to improve their competitive position so that they could maintain their households.

The organisation invested in training and development of employees on an ongoing basis. It was mentioned that training of employees in the latest developments would enhance employee skills and workers would embrace changes in future. Another employee's experiences was that people would be willing to change if they knew what the change was all about and how it would impact on their work. Mention was made that employee involvement from the very outset would clear any negativity that may be spread through the grapevine within the organisation. It was said that management discussions behind closed doors regarding changes are unhealthy for an organisation. Open communication and the building of trust among the people are extremely important.

An employee mentioned that learning can only take place by change in attitude and behaviour. She mentioned that training makes employees aware of the current occurrences, what employees should expect and the manner in which barriers could be reduced. This is a great motivator for the workforce.

Employees were enlightened on the benefits of team-work and line balancing and how it could change the entire organisation. An employee mentioned that training made them understand the current status in the clothing industry and how they could rise above the competition. It was mentioned that they are setting an example for the industry to follow and they could be the best manufacturer in the clothing industry. The advantages they experienced created team-spirit and they found that they were responsible for the making this project a success.

Another employee mentioned that the concept would be ineffective and that government intervention was the only way that the industry could be saved. The researcher interacted with the individual and convinced him of the way forward.

The employee admitted that he was sceptical and did not want change, but since there was communication with management and training of workers, he would “go with the flow.” The comments suggest that a project such as this needs education, training, communication and management support.

Open communication is important in a project. The sharing of information between management and employees enhances the success of the project. It was mentioned that the dissemination of too much information and the interpretation of the information could cause problems within the work environment. The “grapevine” misinterprets information and employees become despondent. It was mentioned that 15 years ago operators were not allowed to speak and at present communication is encouraged in team-work.

An employee mentioned that this was quite a change for “them.” It was mentioned that approximately 15 years ago the floor manager had an elevated office at a centralised point on the machine floor where there was a clear view of all employees. Supervisors were called into the manager’s office on a regular basis and screamed at while the operators observed his ruthless behaviour. “Management by walk about” (MBWA) has become a prominent feature in the clothing industry. It was mentioned that the manager should be a part of the team on the production floor, know the employees by name and understand the problems experienced. Much could be achieved if team-work is implemented throughout the organisation and all employees strive to achieve the mission and vision of the organisation. Human assets need to be appreciated to enhance their motivational level. Working together could “change a mountain into a molehill,” mentioned an employee.

It was mentioned that employees were often ignored and management made all the decisions. Issues such as product quality, customer expectations, productivity were never disclosed to employees. A motivated workforce can achieve labour efficiency without the pressure from management. It was explained that communication among the employees and management improved quality of production and an empowered employee could definitely add value to the organisation, no matter what problems were faced.

It was mentioned that customer focus and expectations, together with quality and on time delivery is an organisational problem, and not only the responsibility of the floor manager’s.

The team effort created a change in the working climate with information sharing that enables employees to better understand the operational aspects of an organisation.

The implementation process outcome indicates that active employee participation with knowledge sharing could improve the performance of the organisation. Sharing information about the costs that go into production and the financial position of the organisation makes employees understand the importance of “right the first time, every time.” With work-study officers involved in the process, all work measurement and method study evaluations were done with the team that shared ideas on methods and ergonomics. With the adoption of transparency in all activities employees understood their situation and that of the organisation.

RECOMMENDATION/MANAGERIAL IMPLICATIONS

A strategic management drive with commitment from the leadership to encapsulate the adoption of improvement techniques through the implementation of line balancing methodology with a focus on gaining a competitive advantage would benefit the struggling clothing industry. This could be accomplished through education and training and the empowerment of employees to manage their processes.

Performance management includes numerous methodologies. The focus in this situation is the implementation of fundamental productivity improvement initiatives. The recommendations for productivity improvement are summarised as follows:

- The application of work-study principles. Work study and industrial engineering practices are important in labour intensive operations. Manufacturers tend to apply estimated time standards which are often incorrect. There is a crucial need to apply scientific work measurement and methods development methodologies. Manufacturers should move towards establishing a work-study department or alternatively train supervisors in the use of such tools as approximately 60% of the industry have not implemented work-study principles.
- Apply training initiatives for all stakeholders. The productivity levels in the clothing industry indicate the need for training and development initiatives. Improvement initiatives would only be successful if supervision and management understood the concepts and implemented the changes. There is a vast range of education and training providers that are available for the delivery of clothing management related programmes. Organisations could sponsor staff to attend training programmes or conduct in-house training in both specialised and non-specialised skills. Thus

scientific principles of line balancing, workflow layout, ergonomics and so forth could be implemented.

- Develop machinist training cells. Machinist training cells provide skills in the manipulation of fabrics, developed work ethics and create a learning curve for new employees towards the attainment of world-class performance.
- Develop quality management systems. The sample reported that the defect rate was approximately 3%. A quality system would monitor and reduce the levels of defects which would save the organisations production costs.
- Technological improvement. Organisations need to upgrade their machinery at various stages in clothing manufacture. Computerised laying and cutting of fabric in the cutting room, automated sewing machines, and automated finishing are some of the areas of innovative machinery. Strategic investments should be made that would improve return on investment and productivity.
- Introduce productivity measurement systems. This would enable the recording of data at process points in real time, thus enabling effective decision making regarding the status of processes.
- Develop planning and scheduling of production. The aim of this would be the meeting of delivery dates as well as maximisation of resources. Organisations should look at software applications.
- Introduce incentive schemes. Productivity gains should be shared with the workforce in the form of incentives. This sharing would encourage labour efficiency and would assist in stimulating the morale of people.
- Black economic empowerment (BEE) initiatives. When management and workers are totally involved in the operation of the organisation and there is transparency of operation, the entire organisation takes ownership of profit/loss of the organisation.
- Style types. The fashion industry is overwhelmed by style changes. Style changes have both a positive and a negative connotation. On a positive note, industry is able to remain competitive by meeting fashion trends, while it causes frequent changes in set-up on the production line.
- When there is a change in the product style, the floor manager is involved with the adjustment of the production line to ease the flow between operations, machinists are required to adjust to new operations and machines require recalibration. This process causes a loss of time, thus increasing the cost of production.
- Production systems. There are three different production systems used in the clothing industry. They are modular manufacturing, the bundle system and the

overhead conveyor system, predominantly known as the “Eton” system. The focus in the clothing industry is on the machining floor where garments are sewn.

The scheduling of production orders is a complex task and has to be done accurately, using software technology. Understanding the complexity of clothing production enables an organisation to schedule orders accurately, thus determining capacity utilisation.

The garment manufacturer should be able to determine the complexity of the order through the application of work-study principles, so that bottlenecks could be avoided. This would improve the utilisation of resources and improve the productivity of the organisation. It is therefore necessary to use the appropriate methodology for the evaluation of job complexity in clothing production in order to meet the demands of the market.

The critical issues in clothing production scheduling are bottlenecks, line balancing, set-ups during changeover and capacity utilisation. These factors require in-depth evaluation when scheduling the production process. The production planner in the clothing industry is faced with a task of scheduling production bearing in mind the complexity of styles and fashion. The implementation of line balancing through the application of work-study principles would assist in improving the current status of the South African clothing industry (Adewole, 2005).

CONCLUSION

The challenge for a clothing production manager is to minimise input costs while achieving improved productivity and remaining flexible and meeting customer demands. Labour savings and increased productivity could be achieved by reducing the ratio of number of workers to number of machines. Increased productivity for human activity could be achieved through multitask operations (i.e. cross-training operators) and other methods that would allow the same amount of work to be done in less time.

In the South African clothing industry, management commitment in supporting improvement initiatives, the management of a diversified workplace and the allocation of resources are essential for performance improvement. Through simple, innovative and creative thinking, the current status of the industry could be improved through the application of the process improvement tools and techniques. The researcher would like to conclude by emphasising that process improvement methodologies need to be implemented through a structured plan of action.

Lastly, support from government in a “value adding” scenario through subsidies, the creation of a centre of clothing excellence which would be funded by government and that would be of a consultative nature would assist organisations in improving their competitive status.

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CELLPHONE USAGE AND THE SOURCES OF INFORMATION: THE ROLE OF AGE

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Consumer behavior, Cellphone, Marketig, Age

ABSTRACT

South Africa's cellphone market has been one of the fastest growing markets. As a result penetration is very high in this industry. Because of the current situation in this industry, companies need to retain consumers in order to survive. This paper therefore observes how different age groups use the functions of their cellphones and which external sources of information have an influence on them when choosing a cellphone service provider. Data was collected from a sample of 463 cellphone users in the Free State province. The results show that there is a significant difference between different age groups in how they use the cellphone functions and the external sources of information. The findings are useful to the cellphone service providers and handset manufacturers in formulating marketing strategies and targeting different market segments.

INTRODUCTION

The South African cellular industry has grown tremendously since its inception. Presently there are more than 40 million cellphone users and penetration into the market is above 90% (Infrastructure: mobile phone penetration, 2010; The Report: South Africa, 2008; United Nations Conference on Trade and Development, 2009; Cellular-News, 2009). Because of high penetration in this industry, companies need to retain consumers to survive in this industry. The management dilemma in this study is that managers of companies in this

industry need to retain consumers because there are not many cellphone non-users available for targetting in order to expand the market share.

To be able to retain consumers, amongst other things, the companies operating in this industry need to be customer centric. This can be achieved when companies understand the behavior patterns of the consumers in such a way that they are able to tailor their offer to their needs. Some of the variables used to explain consumer behavior patterns are age and usage of a product and/ service (Mazzoni, et al., 2007 and Jha, 2008). Furthermore, when consumers make decisions about which product/service to choose, they also rely on sources of information (Hawkins et al., 2007 and Blackwell et al., 2006). Knowing which sources of information consumers rely on when choosing a cellular service provider, is one of the ways which can help companies to reach consumers. This view is supported by Pakola et al. (2003) who mentioned that companies are more likely to succeed if they market themselves relevantly (of which the relevant source of information is one of the ways) to the right audience while focusing on the real needs of the consumers.

In this study cellphone usage and sources of information are of high importance because handset manufacturers (who are responsible for the cellphone functions) and cellular service providers (who are responsible for communicating the offer) work together strategically to create differentiated messages (Petruzzellis, 2010). In other words, technology effort is combined with marketing effort in order to be successful in the market.

Previous studies have observed the importance of consumer behavior in the cellphone market (Benbunan-Fich and Benbunan, 2007; Antoine, 2004 and Pakola, 2003), how age influences the adoption of cellphone services (Yang and Folly, 2008 and Laukkanen et al., 2007), age differences in cellphone service perceptions (Kumar and Lim, 2008) and usage patterns of cellphones (Sohn and Kim, 2008). These studies confirm the importance of age in consumer behavior in the cellphone industry. However, little is known about role of age in the usage of cellphones and external information sources in the decision making of cellular service provider by South African consumers.

In the study, cellphone usage is discussed from the perspective of the manufacturer as they are the designers of the handsets and the sources of information are observed from the perspective of the cellular service provider as these service providers are more responsible for communicating the offer. The intention of bringing these aspects together is so that manufacturers can know which functions to focus more on for various consumers and so that the cellular service providers can know what to focus on when communicating their message to the consumers. Yang and Folly (2009) mention that the marketing strategies utilized by cellular service providers are one of the contributing factors in explaining different

cellphone usage patterns. According to Petruzzellis (2007), this is why manufacturers, even though they have well established brands, strategically align with cellular service providers to gain success in the market place.

Considering the proceeding discussion, the research question is as follows: Do South African consumers from various age groups differ in their use of a cellphone and in their choice of external information sources when choosing a cellular service provider? The primary objective of the study is thus to investigate by means of an empirical study if age group differences exist between cellphone usage and in the choice of external source of information when making a decision about which cellular service provider to subscribe to.

An understanding of how different age groups differ in their cellphone usage and which external sources of information they rely on when making decisions can assist companies in being effective when selling their services and products to the consumer.

To achieve the objective of this study, the literature will focus on cellphone usage and its role in marketing, age differences and sources of information. The methodology undertaken then follows and finally the results and conclusion of the study are given.

CELLPHONE USAGE AND ITS ROLE IN MARKETING

Cellphones today play an import role in the lives of consumers because they are now able to get more benefits other than just communication. Some of the functions of a cellphone include the following: communication (calling and sending messages), entertainment (sending pictures, updating sports/news, games, music, and watching movies), diary, calculator, computer (internet and email), GPS camera (video clips and photography) and search feature (movie listings, weather, stock quotes, etc.) (Lim et al., 2006). A cellphone is therefore no longer just a technology product but it is now a social necessity also. Depending on what consumers' needs are, cellphones are used differently. The various functions available on a cellphone enables the consumer meets their various needs. For example Yang and Folly (2008) mentions that consumer' emotions are more fulfilled when they download ringtones, music and games (Sweeney and Soutar, 2001). Consumers' need to socialize is also met when they use communication functions of a cellphone like text messaging services (Yang and Folly, 2009).

Communication capacity and access to various services is more important to the consumer (Watson et al., 2002) and these are some of the variables which explain demand for such a product (Petrsellis, 2007). For example, Antoine (2004) discussed different types of

consumers based on how they used their cellphones. The “uninvolved” were those consumers who had a limited use of a cellphone. They used it to communicate a few times a month and wanted it to be easy to use. The “new life harmony” was the consumers who used their cellphones for calling on a daily basis. The “voice as a link” consumers were relying on the cellphones to connect emotionally for no apparent reason and were not interested in more features of a cellphone. The “adopters” on the other hand were only ready to make use of additional functions of a cellphone it met their needs; otherwise it was used for basic usage. The “intense” consumers used SMS more than any function on the cellphone. The “forerunners” were consumers who were most equipped with hi-tech devices and for them a cellphone was used more as a multimedia device than a communication tool. This shows that different types of consumers can be identified and targeted on the basis of their usage of a cellphone.

From the above discussion, it is clear that cellphone usage is not only important to consumers but also in marketing. Positioning has moved from status symbol to benefits sought by consumers. Functions available on a cellphone have a marketing potential and can be used as a source of competition (Yang and Folly, 2008). These functions have been identified as key strategy components for cellular service providers (Dressler, 2004) and these functions also influence consumers to purchase cellphones (Yang and Folly, 2008).

AGE DIFFERENCES IN CELLPHONE USAGE

Technology usage and the acceptance thereof have been widely explained by the variable of age (Dholakia and Uusitalo, 2002; Yung and Fally, 2008 and Donthu and Garcia, 1999). Previous research has also found that consumers’ age influences how information technology is accepted (Morris and Venkatesh, 2000). Yang and Folly (2008) supported the view of taking age into consideration when it comes to cellphone functions since differences might exist between age groups concerning the level of knowledge of technology and information processing ability. The frequency of usage of such functions varies among consumers depending of demographic variables, including age (Rice and Katz, 2008 and Skog, 2002). They further emphasised that since age can explain differences in cellphone usage, it can be helpful in identifying consumer segments which can positively impact the marketing effort to companies.

Young consumers have grown up with technology from an early age and their perception of technology related products, like cellphones, is that they are easy to use and they are more confident when using them (Yang and Folly, (2008). As a result, younger consumers prefer

to make use of the added functions of a cellphone as proven by the findings of Mazzoni et al. (2007). Because young consumers are more comfortable with technology (Cox, 2006), they differ in how they relate to technology (Yang and Folly, 2008). Young consumers have been found to use internet-enabled phones much more often (Schadler, 2006) because they have more need for it (Pedersen and Ling, 2003).

Young consumers are an attractive segment to marketers because although they might not be generating high levels of income, they have an influence on how their families make purchase decisions (Renn and Arnold, 2003). They do not struggle to adapt to the functions of a cellphone (Kumar and Lim, 2008) and they make use of their cellphones more than any other age group (Kumar and Lim, 2008 and Kumar and Lim, 2008). One of the reasons for this is that young consumers use their cellphones to express themselves (Ling, 2001 and Taylor and Harper, 2001) and uniqueness through the use of ring tones, screensavers and message tones (Kumar and Lim, 2008).

Older consumers are also attractive to business since they have the highest spending power (Solomon, 2009). They are exposed to technology and make use of cellphones mainly for communication with significant others in their lives and few make use of SMS and e-mail services (Kumar and Lim, 2008). Kumar and Lim (2008), also found that older consumers use their cellphones mainly for calling family members, making emergency calls and for business. Older consumers try new products and services and experiment with them (Bernstein, 2001). They are also responsive to the changing trends (Haynes, 2004) seeing that they are also technologically advanced (Kumar and Lim, 2008). They respond even more positively if their needs are met (Laukkanen et al., 2007).

As already mentioned older consumers are the lowest users of cellphone functions. Few reasons can be attributed to this. Kumar and Lim (2008) mentioned that marketers have simply ignored this segment and as Laukkanen et al. (2007) mentioned, older consumers have not demonstrated how their offer will meet the needs of older consumers. Moschis, (2003) is of the opinion that older consumers are ignored by marketers because they see no reason to focus on older consumers. However, marketers need to pay attention to this segment because it has potential (Young and Folly, 2008 and Kumar and Lim, 2008). As a result of not paying attention to older consumers, older consumers tend to resist technological innovation (Laukkanen et al., 2007).

SOURCES OF INFORMATION AND THEIR ROLE IN MARKETING

There has not been much research done on how sources of information impact consumers when deciding upon which cellular service provider to choose. However it stands for reason that the sources of information do play a role when a consumer chooses a cellular service provider because sources of information play a role of informing the consumer whether a product or service will meet his/her need or not (Schiffman and Kanuk, 2004). When consumers make decisions about which cellular service provider to choose they rely on various sources of information. Sources of information could be internal or external.

Consumers rely on their internal source of information to recall brands, attributes, evaluations and experiences. Consumers are able to remember two to eight brands for consideration (Keller, 2008). The factors which impact brand recall include: prototypicality, brand familiarity, relevance to goals and usage situations, brand preference and retrieval cues. Consumers also tend to rely on their internal source of information if they can remember attributes of a brand which are accessible, diagnostic salient and vivid (Hoyer and Macinnis, 2010).

External sources of information are those external sources which are consulted before a decision is made. Consumers will often rely on external sources because their experiences may not always be adequate. For example, consumers may rely on external sources so that they are able to make better decisions and they want to keep up with the new knowledge (Hawkins, et al., 2007). The external sources of information include: retailer search (visiting stores), media search (e.g. advertizing, online ads, websites, etc.) and interpersonal (e.g. friends, coworkers, other consumers, etc. (Hoyer and Macinnis, 2010). Consumers will be motivated to use external sources of information if perceived risk is high, costs are high, there are other alternatives and there is high uncertainty.

Marketers need to know which sources of information consumers rely on when making decisions so that they can ensure that consumers get the relevant message about the product/service through those sources (Keller, 2008). As far as internal sources of information are concerned for marketing, it means that managers need to ensure that their services are purposefully associated with positive experiences and images which will improve memory recall. Marketers need to highlight recalled attributes which differentiate them from competitors. For external sources of information to benefit the companies, managers need to ensure that information is easy to access, is readily available and requires least consumer effort (Blackwell et al., 2006). Such information should aim to create positive attitudes from consumers with the intent of positively changing their behavior.

METHODOLOGY

The sample

This study used the survey research. Target population was consumers who utilise cellphones. The respondents were asked to indicate which sources of information influence them when choosing a cellular service provider and they were also asked to indicate frequency of use of cellphone functions.

The sample frame was the cellphone users in the four municipalities of the Free State Province. The sampling technique used was non-probability sampling. One of the most important reasons why non-probability sampling was used is because when this research was carried out, there were no lists of cellphone users, particularly the prepaid market. The Regulation of Interception of Communications and Provision of Communication-Related Information Act (RICA) is in the process of creating such a database. It implies that when this study was carried out there was no database. The sample elements were therefore selected on personal judgements or convenience. 463 questionnaires were used for analysis.

Measurements

The field workers distributed the questionnaires in the malls and the shopping centres. Closed-ended questions were used. The first section required the demographic information. This section was followed by one where respondents were asked about which sources of information they used or relied on when choosing a cellular service provider. The questions could be answered by choosing options where 1=never, 2= rarely, 3= sometimes, 4= often and 5= very often. Finally they were asked to indicate how often they used cellphone functions and 1= never, 2= once in a week, 3= two to four times in a week, 4= once a day and 5= more than once a day. The sources of information and the functions of a cellphone included were taken from the literature reviewed (Hoyer and Macinnis, 2010 Jha, 2008; Lim et al., 2006).

Data collection

The questionnaire was pre-tested to identify problems, make sure that the instructions are clear and that the flow of questions was natural. Pre-testing was done with other academics

who are also research professionals. Furthermore, the questionnaire was pre-tested with a potential group of 20 respondents to see how clear the questions were. After pre-testing, the necessary adjustments to the questionnaire were made.

To gather the data, the fieldworkers were identified as final year BCom students. During the training they were taught how to administer the questionnaire and how to approach the respondents. Fieldwork was carried out in five steps (Cant et al., 2003).

- Step 1 (selecting fieldworkers): Final year BCom students were used.
- Step 2 (training): The fieldworkers were trained and prepared to handle objection and refusal. Part of the training also included explanation of the questions to the participants. They were also asked to complete the questionnaire to ensure that they clearly understood the instructions and questions.
- Step 3 (supervising the fieldworkers): This was done to ensure that the fieldworkers were doing what they were supposed to do in terms of selecting respondents. They worked from Monday to Saturday. On each day they handed out the questionnaires during three time intervals, namely 09:00–11:00, 12:00–14:00 and 15:00–17:00. This was to ensure that different kinds of respondents would be represented. The researcher constantly communicated with the fieldworkers while they were carrying out the work.
- Step 4 (validate fieldwork): Here a fixed daily routine based on a fieldwork programme ensured that the correct procedure was carried out (as can be seen in step 3 above). Whenever the fieldworkers experienced challenges, they called the supervisor (researcher) for direction.
- Step 5 (evaluating fieldworkers): During this step the fieldworkers delivered the questionnaires to the researcher. Each questionnaire was viewed for completeness and the response rate was also checked. The response rate was satisfactory, because out of the 600 questionnaires, 463 were usable. This is partly because the fieldworkers made sure to give the questionnaires to those respondents who would be able to complete it.

Data Analysis

To assess the group differences, One Way Anova procedure was used by means of SPSS computer programme (PASW statistics 18). This was done to compare age with sources of information and then age with cellphone usage.

THE EMPIRICAL RESULTS

Table 1 shows frequency distribution of participants.

TABLE 1
FREQUENCY ANALYSIS

Age group	Number	percentage
20 – 24	136	29.4
25 – 29	160	34.6
30 – 39	97	21
40+	70	15
Total	463	100

The sample was made of 463 responses. The age group of 20 – 29 year olds was split because of the differences that exist between them. Consumers in their early twenties generate less income (77.8% generate less than R5 000 a month) while those in their late twenties they generate more (70.7% generate more than R5 000 per month). This can be explained by the fact that most of them are working while the younger ones are still students. Because consumers who are working have different needs compared to those who are not, this age group was then split. The consumers in their thirties were in one group as most of them are from Y and those in their twenties are from generation X. The ones in their forties and above are the baby boomers (Young and Folly, 2008; Kumar and Lim, 2008). The sample is reflective of the population because even in the whole population there are more younger people than older ones (Statistics South Africa, 2009).

To assess the impact of age on sources of information, one way ANOVA (Analysis of Variance) was conducted (see Table 2).

TABLE 2
ANALYSIS OF VARIANCE RESULTS: THE ROLE OF AG ON SOURCES OF INFORMATION

Sources of information and mean scores	Sum of Squares	df	Mean Square	F	Sig.
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Acquaintances (2.87)	Between Groups	32.026	3	10.675	6.129	.000
	Within Groups	799.456	459	1.742		
	Total	831.482	462			
Advertising (2.76)	Between Groups	18.214	3	6.071	3.125	.026
	Within Groups	891.652	459	1.943		
	Total	909.866	462			
Websites (2.69)	Between Groups	41.542	3	13.847	7.397	.000
	Within Groups	859.292	459	1.872		
	Total	900.834	462			
Sales Promotion (2.92)	Between Groups	20.417	3	6.806	3.669	.012
	Within Groups	851.298	459	1.855		
	Total	871.715	462			
Physical surroundings (2.67)	Between Groups	22.930	3	7.643	3.831	.010
	Within Groups	915.848	459	1.995		
	Total	938.778	462			
Personal experience (3.87)	Between Groups	16.432	3	5.477	3.219	.023
	Within Groups	781.049	459	1.702		
	Total	797.482	462			

Significance was measured at 95% confidence level. All the sources of information had a significant relationship with age except for family, friends and sales personnel.

A Tukey test was run to identify which age groups were significantly different from each other as far as the sources of information were concerned. The results of Tukey test showed that there was a significant difference between 20 – 24 year olds and the 40+ year olds concerning acquaintances' ($p < 0.000$), websites ($p < 0.014$) and sales promotion (0.008). These sources of information were more consulted by the 20 – 24 year olds. On average he 20 – 24 year olds indicated that sometimes they use these sources whereas the 40+ years indicated that they rarely rely on these sources as their mean scores indicated.

The 25 – 29 year olds were significantly different from the 30 – 39 year olds and the 40+ year olds concerning websites ($p < 0.014$ and 0.000). The 25 – 29 year olds were significantly different from the 40+ year olds concerning sales promotion (0.08) and physical surroundings (0.03). The 25 – 29 year olds sometimes relied on these sources compared to the 40+ year olds and the 30 – 39 year olds who rarely did.

When it came to personal experience, there was a significant difference between the 20 – 24 year olds and the 25 – 29 year olds ($p < 0.023$). The 20 – 24 year olds indicated that they rely more often on their personal experience than the 25 – 29 year olds.

Overall the results show that on average, 40+ year olds consulted the sources of information (both internal and external) the least compared to all the age groups and the 20 – 24 year olds consulted them the most. However, the mean score of personal experience for all age groups was higher than the mean scores of all the external sources of information for all age groups (see Table 2). This shows that when it comes to choosing a cellular service provider, consumers of all ages rely more on their experience with the service providers than they do on the external sources of information.

TABLE 3
ANALYSIS OF VARIANCE RESULTS: THE ROLE OF AGE ON FUNCTIONS OF OF A CELLPHONE (COMMUNICATION)

Functions and mean scores		Sum of Squares	df	Mean Square	F	Sig.
Calling (4.23)	Between Groups	28.009	3	9.336	7.115	.000
	Within Groups	602.263	459	1.312		
	Total	630.272	462			
Message sending (4.16)	Between Groups	18.530	3	6.177	5.735	.001
	Within Groups	494.321	459	1.077		
	Total	512.851	462			

Table 3 shows that there was a significant difference between age groups concerning the usage of communication functions of a cellphone. A Tukey test showed that the 20 – 24 year olds were significantly different from the 25 – 29 year olds concerning calling and sending messages ($p < 0.000$ and 0.011). The 20 – 24 year olds were more likely to make use of these functions more than once a day compared to the 25 – 29 year olds who were more likely to use them once a day. The results of these two functions for all the age groups indicated that the consumers of all age groups will on average make use of these functions at least once a day.

TABLE 4

ANALYSIS OF VARIANCE RESULTS: THE ROLE OF AGE ON FUNCTIONS OF A CELLPHONE (MULTIMEDIA)

Functions and mean scores		Sum of Squares	df	Mean Square	F	Sig.
Sending pictures (2.71)	Between Groups	23.147	3	7.716	4.099	.007
	Within Groups	864.071	459	1.883		
	Total	887.218	462			
Video clips (2.17)	Between Groups	31.103	3	10.368	6.480	.000
	Within Groups	734.417	459	1.600		
	Total	765.521	462			
Photography (3.21)	Between Groups	65.772	3	21.924	10.467	.000
	Within Groups	961.416	459	2.095		
	Total	1027.188	462			

Differences were also found among the camera functions (see Table 4). Tukey test indicated the 40+ year olds are significantly different from the 20 – 24 year olds and the 25 – 29 year olds concerning sending pictures ($p < 0.005$ and 0.020). 40 + year olds indicated that they would send a picture atleast once a week, whereas the consumers in their twenties would send pictures two to four times a week. Video clips were more used by the 20 – 24 year olds (two to four times a week) compared to the 30 – 39 year olds and the 40+ year olds who took video clips at least once a week (Tukey test showed a significance of 0.037 and 0.000). photography was also used more by the 20 – 24 year olds (once a day) compared all the other age groups who used this function two to four times a week (Tukey test was 0.001 , 0.009 and 0.000). The mean scores for the camera functions (see Table 4), show that the photography is the most used function and it is used three to four times week.

TABLE 5
ANALYSIS OF VARIANCE RESULTS: THE ROLE OF AGE ON FUNCTIONS OF A CELLPHONE (ENTERTAINMENT)

Functions and mean scores		Sum of Squares	df	Mean Square	F	Sig.
Games (2.42)	Between Groups	60.545	3	20.182	9.792	.000
	Within Groups	946.003	459	2.061		

	Total	1006.549	462			
Music (2.93)	Between Groups	247.228	3	82.409	42.901	.000
	Within Groups	881.697	459	1.921		
	Total	1128.924	462			
Movies (1.81)	Between Groups	26.027	3	8.676	5.767	.001
	Within Groups	690.478	459	1.504		
	Total	716.505	462			

There were also significant differences between age groups regarding the entertainment functions of a cellphone. The games were used more by the 20 – 24 year olds compared to the 25 – 29 year olds (Tukey test showed significance at 0.005) and 40 + year olds (Tukey test showed significance at 0.001). There was also a significant difference between 40+ year olds and the 25 – 29 year olds (Tukey test showed significance at 0.995) as well as the 30 – 39 year olds (Tukey test showed significance at 0.001). The results show that the consumers in their twenties use the game function significantly higher than older consumers, although the 20 – 24 year olds use this function even more often, two to four times a week.

Again music function was used the most by the younger consumers. There was a significant difference between the 20 – 24 year olds and all the other age groups (Tukey test showed significance at 0.000 for all the age groups). The 25 – 29 year olds were also significantly different from the 3 – 39 year olds (Tukey test showed significance at 0.010) and the 40 + year olds (Tukey test showed significance at 0.000). The 20 – 24 year olds indicated that they listen to music at least once a day, for the 25 – 29 year olds it was two to four times a week and the other age groups indicated once a week.

The movies function was the least used function. Tukey test showed significance at 0.036 and 0.000 between the 40+ year olds and the 20 – 24 year olds and the 25 – 29 year olds. Young consumers said that they would use the function once a week and the older consumers said that they never use it. The average for all age groups showed that music is the favorite entertainment function (see Table 5).

TABLE 5
ANALYSIS OF VARIANCE RESULTS: THE ROLE OF AGE ON FUNCTIONS OF A CELLPHONE (COMPUTER)

Functions and mean scores	Sum Squares	df	Mean Square	F	Sig.
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Internet (3.10)	Between Groups	161.635	3	53.878	23.065	.000
	Within Groups	1072.184	459	2.336		
	Total	1233.819	462			
e-mail (2.41)	Between Groups	59.488	3	19.829	8.453	.000
	Within Groups	1076.719	459	2.346		
	Total	1136.207	462			

Table 6 also shows that there were significant differences between age groups concerning the computer functions of a cellphone. There were significant differences between the 20 – 24 year olds and all the other age groups (Tukey test showed significance at 0.001, 0.000 and 0.000 respectively). There were also significant differences between 25 – 29 year olds and the 30 – 39 (Tukey test showed significance at 0.001) year olds and 40+ year olds (Tukey test showed significance at 0.001). The 20 – 24 year olds used the internet at least once a day and the 25 – 29 used it two to four times a week and the other age groups used it once a week.

For the e-mail, significant differences lied between the 25 – 29 year olds and the 30 – 39 year olds and the 40+ year olds (Tukey test showed significance at 0.000 for both groups). There were also significant difference between the 20 – 24 year olds and the 40+ year olds (Tukey test showed significance at 0.006). The 25 – 29 year olds used the email function more than any other group. They used it 3 – four times a week.

TABLE 7
ANALYSIS OF VARIANCE RESULTS: THE ROLE OF AGE ON FUNCTIONS OF A CELLPHONE (ADDITIONAL FUNCTIONS)

Functions and mean scores	Sum of Squares	df	Mean Square	F	Sig.
Updating sports/news (2.9) Between Groups	29.213	3	9.738	5.007	.002

	Within Groups	892.679	459	1.945		
	Total	921.892	462			
Storing data (3.29)	Between	23.916	3	7.972	3.784	.011
	Groups					
	Within Groups	966.879	459	2.106		
	Total	990.795	462			
Organizing schedule (3)	Between	17.863	3	5.954	2.733	.043
	Groups					
	Within Groups	1000.128	459	2.179		
	Total	1017.991	462			
Mobile search features (2.20)	Between	63.202	3	21.067	10.013	.000
	Groups					
	Within Groups	965.714	459	2.104		
	Total	1028.916	462			

Table 7 shows the most used additional function of a cellphone across different age groups is storing data and mobile search features (movie listings, weather, stock quotes, etc.) was the least used. Tukey test showed significance between 20 – 24 year olds and 40+ year olds at 0.042 and between 25 – 29 year olds and 40+ year olds at 0.002. For data storage it was between 20 – 24 year olds and the 30 – 39 year olds (Tukey test showed significance at 0.006). The significance for organizing schedule lied between the 20 – 24 year olds and the 40+ year olds (Tukey test showed significance at 0.049). For mobile search features, significance lied between 25 – 29 year olds and 30 – 39 year olds (Tukey test showed significance at 0.007) and between 25 – 29 year olds and 40 + year olds (Tukey test showed significance at 0.000).

DISCUSSION

The results of the study show that younger consumers use external and internal sources of information more than older consumers in making the decision of which service provider to adopt. Younger and older consumers do differ in the use of the following external sources of information: acquaintances, advertising, websites, sales promotions, physical surroundings. However, when the external sources of information were compared with the internal source of information (experience), it was clear that consumers of all ages relied more on their experience than on external sources of information when deciding upon which cellular service provider to subscribe to.

According to the results of the study the functions of a cellphone can be grouped into five categories. These categories are communication, multimedia, entertainment, computer and additional function. Overall, the communication functions (calling and message sending) was used by all the age groups, followed by storing data, photography and the internet. The least used function by all the age groups were movies and video clips. With regard to calling and messaging, the respondents indicated that they make more calls than they sent messages and that they use both of these functions more than once a day. In the multimedia category, photography was the most used function (two to four times a week), followed by the sending pictures and video clips (once a week). Results from the entertainment category showed that music was more used (two to four times a week) compared to games and movies function (which were both used once a week). In the computer function category, the internet was more used (two to four times a week) compared to e-mail which was used once a week. Finally the most used additional function was the storing data function, which was used two to four times a week.

The results also showed that consumers across different age groups differ in their use of cellphone functions. Overall, younger consumers make more use of cellphone functions than older consumers. Older and younger consumers prefer to use the communication functions of a cellphone, but younger consumers prefer the communication functions the most.

MANAGERIAL IMPLICATIONS

For marketing it means that the information provided by sales personnel can be kept standard since there were no differences between the age groups. Since younger consumers relied more on acquaintances than older consumers, it means that the younger population can be encouraged to engage in referring information to each other and this can be achieved when referral systems are in place. These referral systems must have some rewards for consumers who make the referrals. This will encourage younger consumers to share the information with their friends.

Other external sources of information can focus more on younger consumers since they relied the most on these sources. The fact that consumers relied more on their experience shows that the information they have is adequate. Marketers must therefore ensure that consumers of all ages have pleasant experiences with their brand and share it with others. This can be achieved when the advertising message puts emphasis on how good the experience will be if consumers choose the cellular service provider in concern and that such experience should be shared with significant others so that they also continue to have pleasant experiences.

The finding on usage of cellphone functions show that even though manufacturers continue to avail more functions for the consumers, communication function is still the most important function on a cellphone. Marketing managers must ensure that they enable consumers to communicate well by offering the best network available and by ensuring that their offer enables consumers to communicate more effectively. The marketing managers must also ensure that they avail packages which have cost benefit for making calls and texting.

When targeting older consumers, marketers need to put emphasis on the communication function through their advertising message. When targeting younger consumers, marketers need to focus their advertising message on communication, entertainment and the internet.

LIMITATIONS OF THE STUDY

This study was only done in the Free State province. Future research must also focus on other provinces in South Africa. This study did not measure consumers' perceptions about the services they are getting nor did it measure perception about the costs associated with such services. Information on such attributes would enable cellular service providers to know how they should improve their offer so that they are able to be effective in retaining their

clients. Future research must thus also focus on perception of service and the perception of costs associated with acquiring such services.

CONCLUSION

This study had the intention of observing the cellphone usage pattern among different age groups and also which sources of information consumers relied on when making decisions. The results showed that differences do exist between the older and the younger consumers. Younger consumers use sources of information more than older consumers and they use cellphone functions more than older consumers. Younger consumers also rely more on their experience when deciding upon a cellular service provider to choose. Older consumers prefer to communicate with their cellphones and they are less interested in other functions of a cellphone. Experiences were also more important to older consumers when choosing a cellular service provider. Based on these findings, marketers need to ensure that their advertizing message focuses on the communication function of a cellphone for all age groups, through packages that have cost benefit for the consumers and cellular service providers will provide them with pleasant experiences.

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**DIFFICULT ECONOMIC CONDITIONS: ARE LAYOFFS IN THE HUMAN RESOURCES
BUSINESS FUNCTION THE ANSWER FOR SMMES?**

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Key words and phrases: SMMEs, business functions, business performance

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ABSTRACT

SMMEs contribute to a country's gross domestic product (GDP) and provide employment for many. However, there exists a high failure rate among SMMEs. Many reasons exist for SMME failures, including unfavourable economic conditions and poor entrepreneurial skills. SMMEs can improve their business performance if they adapt their business functions. It is important to investigate how SMMEs can adapt key business functions (for this study only the financial-, marketing-, purchasing- and human resources functions) to improve their business performance.

An empirical investigation was conducted with 350 SMMEs as respondents in the Nelson Mandela Metropole. The study revealed that the four key business functions need adjustments during difficult economic times to improve business performance. SMMEs

respondents identified financial management as the business function that requires the most adjustments. The findings revealed that human resources management is the last business area that SMMEs should adapt during difficult economic times.

This South African study is unique and links to the recent difficult economic times (2007 – 2009). The results and recommendations contribute to SMMEs knowledge of changing four key business functions to improve business performance, during difficult economic times.

INTRODUCTION

According to Mahadea and Pillay (2008:437), only one in 10 newly established firms survive for longer than 10 years in the business environment. The lack of entrepreneurial skills displayed by firm owners and managers, as well as their lack of expertise of operating in a competitive business environment, are possible reasons for these firm failures. In addition, economic factors such as poor sales and weak growth prospects negatively influence firms' chances of survival. Firms of all sizes experience these problems and small, medium and micro enterprises (SMMEs) are no exception, which is the focus of this paper. SMMEs are defined as firms with a maximum of 200 employees and where the owners are mostly directly involved with the management of the firm. In South Africa and many other countries, the establishment and development of SMMEs is a key focus area, and the South African government identifies SMMEs as a vital role player in providing employment and relieving poverty in the country. Mahadea and Pillay (2008:431) confirm that SMMEs contribute significantly to job creation, economic growth and development.

In addition to the standard business challenges faced by SMMEs as mentioned above, the global economy is slowly recovering from difficult economic conditions over the last two years (2007 – 2009). During this time, access to funds from banks were limited due to tightening credit policies, and there was a decrease in the production of products and services due to the lack of demand thereof from consumers worldwide. However, SMMEs should be able to adapt to different, and difficult, economic conditions (World Bank, 2009).

SMMEs need to familiarise themselves with their business functions as these functions are essential towards a firm's overall business performance which can be measured by sales, profits, rates of return, customer satisfaction and customer retention. It is thus important for firm owners and managers (hereafter referred to as owners) to be able to adjust and control their business functions when they are faced with difficult economic conditions such as a recession.

The above discussion shows that a firm's business performance, including the performance of an SMME, is influenced by a controllable set of conditions and an uncontrollable set of conditions. The controllable set of conditions is the internal activities and business areas of a firm, which are the characteristics or resources of the firm, such as the business functions. A firm's business functions include general and strategic-, purchasing-, production-, marketing-, financial-, human resources-, business communication- and information management (Bosch, Tait and Venter, 2006:29). The uncontrollable set of conditions influencing firms are external conditions such as economical, social, political and technological forces over which firms have no control. (Mahadea and Pillay, 2008:433). Due to SMMEs having no control over these ever-changing conditions, SMME owners need to focus on adapting their firms' business functions, which are internal and controllable to the firm. Surviving threats and exploiting opportunities from the uncontrollable variables can be achieved by adjusting the controllable business functions.

Finances are often a major reason for business failure. Therefore, during difficult economic conditions, many owners are concerned about their finances and decide to make changes to capital arrangements and cash flow activities. For SMMEs purchasing costs are often a critical expense and many owners focus on reducing purchasing costs. Marketing efforts receive increased attention during difficult economic times as additional marketing is often required to maintain adequate sales levels in the competitive business environment. Other SMME owners immediately start with employee layoffs to decrease costs when faced with pressures in the business environment. Literature also confirms that the lack of resources and experience in the fields of finance, purchasing, marketing and human resources often lead to SMME failures (Abor & Quartey, 2010; Olawale & Garwe, 2010; Tambunan 2008 and Van Scheers & Radipere, 2007). Although only four business functions are discussed in this study, the other business functions are also important and cannot be neglected in the management of SMMEs. For the purpose of this study, the financial-, purchasing-, marketing- and human resources functions can be highlighted as four key business functions.

Based on the introduction and literature overview above, it is evident that it is important to investigate how SMMEs should adapt the four key business functions to ensure improved business performance, especially during difficult economic times. No previous study in South Africa considered this topic in the light of difficult economic conditions, and therefore this study is unique in aiming to empirically investigate how SMMEs should adapt four key business functions (independent variables) to positively influence their business performance (dependent variable). Findings from the study could lead to recommendations

to SMMEs in terms of the management of the four key business functions when faced with difficult economic conditions, in order to improve business performance.

PURPOSE AND OBJECTIVES

The primary objective of this study was to identify and investigate the influence of four key business functions on SMME business performance during difficult economic conditions in South Africa, specifically in the Nelson Mandela Metropole. For the primary research, a hypothetical model was constructed and tested in an empirical investigation.

In order to assess the influence of difficult economic conditions on four key SMME business functions and business performance, the following secondary objectives were pursued:

- to investigate literature on SMMEs and the economy;
- to investigate literature on four key business functions;
- to perform an empirical investigation among SMMEs in the Nelson Mandela Metropole; and
- to give recommendations to SMMEs on how to manage their business functions to improve business performance, when faced with difficult economic conditions.

LITERATURE OVERVIEW

Based on the objectives stated above, a literature overview was conducted concerning the importance and current condition of SMMEs in South Africa, four key business functions of SMMEs, and the measurement methods of SMME business performance.

The importance and current condition of SMMEs in South Africa

The establishment and success of SMMEs are important to any country. In South Africa, more than 80% of all firms are classified as SMMEs and they contribute approximately 40% of the total economic activity in the country (Tshabalala, 2007:1). Therefore, SMME growth and survival is pertinent in South Africa.

In South Africa, 23.6% of the population is currently unemployed (StatsOnline, 2009). The unemployment rate can be reduced by the establishment and growth of SMMEs, as these firms create jobs. According to Mutezo (2005:10), SMMEs minimise income inequality by creating jobs which ensure income stability. Various authors found that SMMEs encourage competition between firms. The benefit of this competition include new product innovation, service development, black economic empowerment (BEE), better skilled employees and

higher levels of job satisfaction. (Chalera, 2007:79; Megginson, Byrd and Megginson, 2006:9).

Considering the above motivations, it can be stated that the survival of SMMEs are essential to any country. Developing countries such as South Africa could realise economic growth and development as well as employment and wealth creation if their SMMEs are adequately prepared to improve business performance. (Tshabalala, 2007:1). However, South Africa's SMME failure rate, where 80% of SMMEs fail within their first five years of existence (Bosch *et al.*, 2006:663), is currently too high.

Why SMMEs fail

Many firms closed down due to the recent global economic crisis (2007 – 2009), and therefore the importance of SMMEs in South Africa has increased over the last two years. During this time strict credit terms limited firms' access to funds from banks (World Bank, 2009). The global economic crises led to a decrease in the production of products and services caused by the lack of customer spending due to the economic conditions (World Bank, 2009). Matisimela (2007) also states that SMMEs are confronted with the lack of access to finance and credit. The lack of capital, specifically the lack of access to adequate and appropriate finance and credit facilities, is a major constraint to firms (Abor & Quartey, 2010:224; Olawale & Garwe, 2010:731 and Acquah, 2007:10).

Matisimela (2007) highlights other challenges for SMMEs include operating in an abrasive legal environment, and their lack of access to markets, procurement and relevant business information. According to Tambunan (2008:150) SMMEs fail due to difficulties in procuring raw materials (purchasing), lack of access to relevant business information as well as problems with marketing and distribution. SMME failure may also be contributed to the low levels of managerial skills of owners and the shortage of effective supportive institutions providing, for example, financial and training support to SMMEs. Van Scheers and Radipere (2007:097) state that the lack of expertise in the field human resources management often leads to SMME failure. Some SMMEs do not see the need to improve their skills, while others cannot afford the high cost of training and advisory services (Abor & Quartey, 2010:224).

As mentioned earlier, difficult economic conditions also increase industry competition among firms. Higher inflation rates accompanied by higher interest rates in challenging economic times make it difficult for SMMEs to achieve their liquidity and solvency goals. In other words, SMMEs struggle to meet their financial obligations. Therefore, during difficult

economic times, SMMEs need to identify focus areas in their firms to improve business performance, such as their business functions.

The business functions and business performance of SMMEs

If owners of SMMEs are well-educated about the business functions of their firms, the SMME failure rate in South Africa can be reduced. Firms have control over their business functions and it is important for SMME owners to realise that they can adapt these functions through various function-specific activities and strategies. The methods a firm uses to adapt and control its business functions can influence the firm's overall performance, and therefore it is essential for owners to be able to manage these functions, especially during difficult economic conditions when business performance can be severely affected. As earlier pointed out, these functions include general and strategic management, which is the overarching function, and purchasing-, production-, marketing-, financial-, human resources-, and business communication- and information management. (Bosch *et al.*, 2006: 29).

This paper has already addressed the importance of the financial-, marketing-, and purchasing- and human resources business functions. Therefore, for the purpose of this study only these four key business functions (financial-, marketing-, purchasing- and human resources functions) will be investigated.

In the human resources business function a firm follows a strategic approach in managing employment relations. All the human resources activities relate to the attracting and retaining of the correct quantity and quality of employees in a firm. Thus, human resources management can be defined as the policies, practices and systems that influence employees' behaviours, attitudes and performance. (Bosch *et al.*, 2006:33; Nieuwenhuizen, 2004:21; Noe, Hollenbeck, Gerhart and Wright, 2004:2; Bratton and Gold, 2003:7).

The marketing business function establishes and maintains the link between the firm and the final consumer of a firm's products and services. Marketing business function activities includes analysing consumer needs and wants, developing new products and services, determining selling prices of products and services, selecting distribution channels and implementing selected marketing communication methods. This shows that the marketing management function conducts the process of analysing, planning, implementing and controlling activities to develop, build and maintain beneficial product and services exchanges with target consumers. (Lamb, Hair, McDaniel, Boshoff and Terblanche, 2004:5; Armstrong and Kotler, 2003:15).

Nieuwenhuizen (2004: 21) states the purchasing business function of a firm deals with the purchasing of products and services of the right quality, in the right quantities, at the right time, at the right price from the right supplier, which are delivered to the correct area or department in the firm. In other words, purchasing deals with the planning, organising, leading and controlling of a firm's sourcing activities to secure the requirements (materials, half-finished products, products and services) from suppliers. (Cyprus, 2009 and Bosch *et al.*, 2006:351).

According to Lasher (2008:6) and Bosch *et al.* (2006:33), the financial business function deals with the acquisition, use and control of capital operations within a firm. Capital operations refer to all the money-related activities in the firm. Moyer, McGuigan and Rao (2007:2) as well as Atrill (2006:2) also state that the financial management function is concerned with investment, financial and profit (income) distribution decisions.

It is evident that these four business functions entail very important management areas necessary to establish and operate a firm successfully. Therefore, especially during difficult economic times, adjustments in these four business functions are essential to SMME business performance.

Business performance of a firm can be measured by the firm's growth in terms of sales turnover, decreases in costs, profits, rates of return on investments, employment turnover rate and growth, and productivity (Griffin, 2008; Lasher, 2008; Dockel and Ligthelm, 2005). In the following section, the effect of possible changes in four key business functions on business performance will be investigated.

RESEARCH METHODOLOGY

This study aimed to identify the influence of four key business functions, namely the financial-, marketing-, purchasing- and human resources business functions (independent variables) on the business performance (dependent variable) of SMMEs, specifically during difficult economic times. In order to test the constructed hypotheses, as well as to analyse and interpret the gathered data quantitatively, the quantitative research design was used (Neill, 2007).

Both primary and secondary resources were used in the study. Secondary sources were used to collect information on SMMEs, the four key business functions and elements of business performance. Secondary sources included books, academic articles and websites. The primary research was conducted by means of an empirical study. For the empirical

investigation, a self-developed, self-administered and structured questionnaire was used as the measuring instrument. The construct validity of the measuring instrument was ensured as experts in the field of entrepreneurship and SMME management assisted with the questionnaire design. A convenience sample of 350 SMMEs in the Nelson Mandela Metropole was targeted as respondents. The empirical investigation was conducted in English, and the questionnaire consisted of three sections.

Section A gathered demographical data of the respondents (owners of SMMEs and their firms). Items in section B were constructed through information gathered from the literature overview, and statements revolved around the four key business functions (financial-, marketing-, purchasing- and human resources business functions). Section B gathered data on the possible influence of the independent variables (the four key business functions) on SMME business performance, with reference made to difficult economic conditions. For the purpose of this study no specific weight allocation was assigned to the different questionnaire items within each functional area. According to theory, the activities described in each of the questionnaire items are of utmost importance for effective and efficient performance of the business areas. Section C consisted of statements based on the literature overview regarding elements of business performance which include sales growth, profits, return on total assets, operating costs, productivity, employee turnover rate and the growth in employees. Once again, no specific weight allocation was assigned to the different questionnaire items measuring business success, since different firms use different measurements (due to the variety of firm sizes). Both sections B and C used a five-point Likert-type scale ranging from 'strongly disagree' (1) to 'strongly agree' (5). The questionnaire was structured in such a manner to determine the perceptions of owners on how each of the four key business functions influence their SMMEs business performance, with reference to difficult economic conditions.

The computer programs Microsoft Excel and Statistica (Version 8) were used to statistically analyse the collected data. Statistical data analyses were performed in four phases as the following statistics were calculated: descriptive statistics, Cronbach alpha correlation coefficients, Pearson correlation coefficients and a linear regression.

Firstly, descriptive statistics were calculated to summarise the sample data distribution. For example, means and frequency distributions were calculated. Zikmund (2003:402) confirms, descriptive statistics describe or summarise information above a population or sample.

Secondly, in order to evaluate the internal reliability and consistency of the measuring instrument items with reference to the independent variables (the four key business functions) and the dependent variable (business performance), Cronbach alpha correlation coefficients were computed. It is stated that Cronbach alpha coefficients range from 0 to 1, and for a measuring instrument to be reliable the test results should be greater than 0.70 (Hair, Babin, Money and Samouel, 2003:172). The higher the Cronbach alpha correlation coefficients above the 0.70 benchmark, the more reliable is a measuring instrument.

In the third data analysis phase, Pearson correlation coefficients were calculated. According to Hair *et al.* (2003:283), the Pearson correlation coefficient measures the association between two variables and the measurement ranges from -1.00 to +1.00, and a test result of zero indicates no association between the two variables. The researchers calculated the Pearson correlation coefficients to determine the strength and direction of the relationship between each of the independent variables (the four key business functions) and the dependent variable (business performance).

In the fourth and last data analysis phase, a simple linear regression analysis was conducted. To measure the linear association between an independent variable and a dependent variable, a regression analysis was performed (Zikmund, 1994:556). The linear regression analysis enabled the researchers to measure the mathematical variance of the relationships between each of the independent variables (the four business functions) and the dependent variable (business performance) and to test the constructed hypotheses.

HYPOTHESES

As mentioned, in order to achieve the primary objective of this study, based on the introduction presented and the literature overview conducted, a number of null hypotheses were formulated. To determine whether relationships exist between each of the four independent variables (financial-, marketing-, purchasing- and human resources business functions) and the dependent variable (business performance), specifically during difficult economic conditions, the following null hypotheses were developed:

H_{0.1}: A relationship exists between the *financial business function* and *business performance*.

H_{0.2}: A relationship exists between the *marketing business function* and *business performance*.

H_{0.3}: A relationship exists between the *purchasing business function* and *business performance*.

H_{0.4}: A relationship exists between the *human resources business function* and *business performance*.

EMPIRICAL RESULTS

From the four phased statistical data analysis, the following section elaborates on the empirical findings of the study. The discussion of the empirical results follows the same sequence as the data analysis phases. First, the descriptive statistics are described, including the demographical data of the SMME respondents. Following the descriptive statistics, the reliability of the measuring instrument is tested through the calculation of Cronbach alpha coefficients. Finally, the Pearson correlation coefficients and simple linear regression results, illustrating the relationships between the independent and the dependent variables, are provided.

Summary results with descriptive statistics

Table 1 illustrates the descriptive statistics (both frequencies and percentages) of the demographical data of the respondents and their firms.

From Table 1 it is evident that the majority of the respondents were males (72%). Most of the respondents were between the ages of 30-39 (27.6%) and 40-49 (25.6%) years. Furthermore, the most popular form of enterprise was the close corporation (44.4%). More than three quarters of the respondents are either a service provider (45.2%) or a retailer (32.4%).

TABLE 1
DEMOGRAPHICAL DATA OF SAMPLE

Items		Frequency	Percentage (%)
Gender	Male	180	72.0
	Female	70	28.0
	Total	250	100
Age category	<20	1	0.4
	20-29	51	20.4
	30-39	69	27.6

	40-49	64	25.6
	50-59	51	20.4
	60+	13	5.2
	Missing values	1	0.4
	Total	250	100
Population group	Asian	23	9.2
	Black	42	16.8
	Coloured	22	8.8
	White	156	62.4
	Not willing to say	7	2.8
	Total	250	100
Form of enterprise	Sole trader	46	18.4
	Partnership	20	8.0
	Close corporation	111	44.4
	Private company	55	22.0
	Trust	13	5.2
	Do not know	5	2.0
	Total	250	100
Nature of the business	Retailer and/or wholesaler	81	32.4
	Manufacturer	25	10.0
	Service provider	113	45.2
	Other	31	12.4
	Total	250	100

The mean scores and standard deviations of the four predetermined variables (independent variables) possibly influencing the *business performance* (dependent variable) of SMMEs can be viewed in Table 2. The mean scores reflect the extent to which the respondents, in general, agreed or disagreed with certain statements and the standard deviation indicates the degree of dispersion around the mean.

TABLE

2

MEANS AND STANDARD DEVIATIONS

Independent variables	Mean	Std. dev.
Financial business function	3.7582	0.6490
Marketing business function	3.3105	0.5402
Purchasing business function	3.5267	0.5921

Human resources business function	3.2794	0.6308
Dependent variable		
Business performance	3.7538	0.6436

As can be seen in Table 2, the independent variable, the *financial business function*, obtained the highest mean score of 3.7582, while the *human resources business function* achieved the lowest mean score of 3.2794. These mean scores, all above level 3 (neutral), indicate that the respondents agree that each of the four SMME business functions need to change to improve *business performance*, specifically during difficult economic conditions. The high standard deviation scores illustrated in Table 2, show that the respondents varied extensively with regard to their viewpoints on adapting the SMME business functions during difficult economic conditions to improve *business performance*. The independent variable, the *financial business function*, obtained the highest standard deviation score of 0.6490 while the independent variable, the *marketing business function*, obtained the lowest score of 0.5402. These standard deviations show that respondents mostly differed in their viewpoints on the *financial business function* and mostly had similar viewpoints regarding the *marketing business function*.

Reliability of the measuring instrument determined with Cronbach alpha coefficients

The results illustrating the internal reliability of the measuring instrument, as measured by the Cronbach alpha coefficients, are shown in Table 3.

TABLE 3
CRONBACH ALPHA CORRELATION COEFFICIENTS

Independent variables	Cronbach alpha
Financial business function	0.8125
Marketing business function	0.6528
Purchasing business function	0.7660
Human resources business function	0.8016
Dependent variable	
Business performance	0.8192

As evident from Table 3 above, excluding a single variable (the *marketing business function*), all the variables obtained Cronbach alpha coefficient scores above the recommended 0.70. The only variable with a Cronbach alpha coefficient below 0.70 was the independent variable *marketing management*. However, according to Malhotra (2006), a

Cronbach alpha coefficient of greater than 0.60 is also regarded as reliable. Therefore, the *marketing business function* variable was regarded as reliable and used in further analyses. As the Cronbach alpha coefficients indicate the reliability of the questionnaire items and the complete measuring instrument, it can be said that the measuring instrument is reliable and can be used for future studies. The dependent variable, *business performance* had the highest Cronbach alpha correlation coefficient of 0.8192, in other words, the items measuring *business performance* can be regarded as the most reliable. The most reliable independent variable was the *financial business function* with a Cronbach alpha coefficient of 0.8125.

Relationships between variables and the testing of the hypotheses with Pearson correlations and linear regression

Table 4 shows the Pearson correlation coefficients and linear regression results obtained from the empirical investigation. The Pearson correlation coefficients were calculated in order to assess and quantify the strength of the relationship between each of the independent variables (the four key business functions) and the dependent variable (*business performance*). Linear regression identifies a mathematical relationship between two or more variables.

TABLE 4

PEARSON CORRELATIONS AND THE LINEAR REGRESSION ANALYSIS

Variables	(r) Business performance	(R²) Business performance
Financial business function	0.2458	0.0604
Marketing business function	0.0874	0.0076
Purchasing business function	0.1210	0.0146
Human resources business function	0.0198	0.0004

Table 4 confirms that each of the predetermined independent variables (the four key business functions) has a positive relationship with the dependent variable (*business performance*) at the 95% confidence level. The Pearson correlation coefficient of 0.2458 identified the strongest relationship between the *financial business function* and *business performance*. The association between the *human resources business function* and

business performance showed the lowest positive relationship with a Pearson correlation coefficient of 0.0198.

The structural relationship between the *financial business function* and *business performance* obtained the highest value of 6.04%, as can be seen in Table 4. This regression analysis result indicates that the *financial business function* explains 6.04% of the variance in *business performance*. The lowest structural relationship regression result of 0.04% was obtained between the *human resources business function* and *business performance*. In other words, the *human resources business function* has the smallest impact on *business performance*. The regression analysis results show that there are also other variables, not considered in this study, which can influence SMMEs *business performance*.

Considering both the Pearson correlation coefficients and the regression results, one can conclude that the *financial business function* has the greatest impact on improving *business performance* during difficult economic conditions. Another SMME business function particularly needing adaptation during difficult economic times, to improve *business performance*, is the *purchasing business function*. The study shows that during difficult economic conditions, changes in the *human resources business function* have the smallest impact on enhancing SMMEs *business performance*.

The empirical results discussed above indicate that all the formulated null hypotheses can be accepted. All the independent variables (the *financial*-, *marketing*-, *purchasing*- and *human resources business functions*) have positive relationships with the dependent variable, *business performance*. Therefore, hypotheses $H_{0,1} - H_{0,4}$ are accepted.

MANAGERIAL IMPLICATIONS

The empirical investigation led to a number of recommendations which can be provided to SMMEs with regard to the relationships between the independent variables (the four key business functions) and the dependent variable (*business performance*).

During difficult economic conditions, the *financial management* business function of SMMEs was found to have the strongest correlation with the firms' *business performance*. It is imperative that SMME owners ensure that their firms have well-managed *financial management* functions and that their financial management tasks are adjusted or changed as needed to survive difficult economic times. Strategies such as increasing the use of a certain type of capital (equity or debt), compiling clear budgets for all activities and

programmes, performing regular ratio analysis, and regularly comparing financial ratios to those of competitors, can be used to enhance the *business performance* of SMMEs during different economic conditions by adapting the *financial business function*.

From the empirical investigation it was also evident that a positive relationship exists between the *purchasing business function* and *business performance*. As mentioned earlier, purchasing deals with the acquiring of products and services of the right quality, in the right quantities, at the right time, at the right price from the right supplier. Therefore, during difficult economic conditions such as a recession for example, firms aim to purchase fewer products and services, reduce the amount of deliveries by purchasing bulk orders, change the type of product or service being ordered, attempt to decrease order prices or change to alternative suppliers who have less expensive products and/or services. These are all purchasing strategies that can be used to improve SMMEs *business performance* while operating in difficult economic times.

A positive relationship, however it is the weakest relationship, exists between the *human resources business function* and the *business performance* of SMMEs during difficult economic conditions. Based on the empirical investigation result, SMMEs efforts to adapt or change the tasks of the *human resources business function* during difficult economic times will improve *business performance* to a lesser extent. However, this result seems odd as one could argue that changing some activities in the *human resources business function* such as carefully selecting new employees, changing remuneration packages or compiling detailed written job descriptions, would significantly improve *business performance*. This is all true. However, this study has shown that SMME owners should not view the *human resources business function* as the first area for change during difficult economic conditions. SMMEs could rather identify areas of change in the *financial business function* and the *purchasing business function* first before retrenching employees or changing their remuneration packages.

The last independent variable, namely the *marketing business function* also has a positive relationship with SMME *business performance* during difficult economic conditions. This shows that SMMEs can also consider changing marketing activities during difficult economic times to enhance *business performance*. For example, marketing strategies such as re-evaluating the target market, decreasing the selling prices of products and/or services, changing the product mix or increasing the use of sales promotion methods can improve SMMEs *business performance*, specifically during difficult economic times.

CONCLUSION

The study provides insight into the management and improvement of the business performance of SMMEs in South Africa. More specifically, the study provided insight into the extent to which four selected business functions (the *financial*-, *marketing*-, *purchasing*- and *human resources business functions*) influence SMMEs *business performance*, while considering difficult economic conditions.

SMMEs are important contributors to the South African economy, specifically due to their contribution to GDP and employment levels. Therefore, the success and improvement in business performance of these firms are essential for the country. Better management of SMMEs, specifically during difficult economic times, can be ensured by focusing on the business functions of SMMEs. It is necessary for SMMEs owners to identify the business functions which should be adapted during difficult economic times. SMMEs should identify strategies to be employed in each of these business functions to ensure firm survival when faced with difficult economic conditions.

The empirical findings of this study have established that all four key business functions required adjustments to have a positive influence on the *business performance* of SMMEs in the Nelson Mandela Metropole during difficult economic conditions. The *financial business function* of SMMEs was viewed by respondents as the most significant variable. Thereafter changes in the *purchasing business function* were regarded as most important to SMMEs. Adjustments in the *financial business function* could include more attention to regular trend- and comparative ratio analyses and the attainment of budgets. In the *purchasing business function*, the focus could be on stricter supplier selection and improvement of negotiation skills when purchasing supplies.

One of the limitations of this study was the use of convenience sampling. Convenience sampling might be biased as there is no assurance that the sample is representative of the defined target population (Burns and Burns, 2008:203). Therefore it is not possible to generalise the findings of this study to the broader population. Future research similar to this study may include studies in other geographical areas of South Africa using more appropriate sampling methods.

In conclusion, this study provides valuable evidence that SMMEs should adjust their business functions. It also gives practical recommendations to SMMEs on how they could adapt four key business functions for improved *business performance* when faced with difficult economic conditions. In order to answer the study's initial title question, the study

concludes that SMMEs should not focus on changing their *human resources business function* first. In fact, SMMEs should first change the other business functions in an attempt to improve business performance. Only thereafter should SMMEs consider making changes to their human resources area. Changes in human resources such as employee layoffs, shorter working hours and reduced remuneration, should be considered last. If SMMEs employ the recommended strategies offered in this study, these firms' business functions will improve, leading to benefits for the firms and their employees. In addition, the survival rate of SMMEs would increase, leading to benefits for the South African economy.

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DRIVERS, FORCES AND FACTORS IN THE BUSINESS ENVIRONMENT

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Differentiating between drivers, forces and factors

Please note: This paper is part of my (Mr D Rossouw) doctorate studies.

ABSTRACT

The fast-changing business environment requires an organisation to manage its business strategically in order to create a sustainable advantage. In this strategic process, organisations need to distinguish drivers from forces and factors in the business environment. However, there is a tendency to use these concepts interchangeably with the assumption that they mean more or less the same.

A literature review was conducted and these concepts were separated. Drivers are described as the most powerful change agents present within the industry environment. Forces refer to the five competitive forces and factors refer mainly to the macroenvironmental and internal environmental influences of an organisation.

Organisations must be able to distinguish drivers from forces and factors. However, merely identifying the drivers is not good enough. The collective impact of the drivers must be assessed in order to formulate strategies to react to this impact.

INTRODUCTION

Today's organisations are faced with challenges due to the fast-changing business environment. These changes are caused mainly by new technology, globalisation, fierce competition within the marketplace and forever-changing consumer needs (Bateman and Snell, 2009:210, 610 & 652).

According to Thompson, Strickland and Gamble (2010:56), all organisations are part of the macroenvironment, which is shaped mainly by influences originating from economic conditions, demographics, societal values and lifestyles, technology, legislation and regulations. Organisations are also shaped by influences from the industry or competitive environment and even from the internal environment. These influences may have a direct bearing on an organisation's decisions regarding direction, objectives and strategy. However, the influences with the biggest strategy-shaping impact typically pertain to the industry environment and organisations will have to be alert to these influences. The most important influences of change are *known* as driving forces or drivers.

PROBLEM INVESTIGATED

Literature indicates that the concepts of drivers, forces and factors are used inconsistently. However, it is important that organisations distinguish drivers from forces and factors. The reason for this is that organisations need be able to identify the drivers in order to react strategically to their impact (Thompson, *et al.*, 2010:86). Therefore, to identify drivers, organisations need to know what they are and how they differ from forces and factors.

RESEARCH OBJECTIVES

The primary objective of this paper is to define drivers, forces and factors and to differentiate drivers from forces and factors within the business environment.

The secondary objectives of this paper are to:

- Conduct a literature review on the drivers, forces and factors within the business environment
- Indicate the role of drivers within the industry environment
- Indicate the origin of drivers
- Make some recommendations with regard to drivers

LITERATURE REVIEW

The literature review starts with a brief overview of strategic management, after which the macroenvironment is reviewed, followed by the industry and internal environment of an organisation.

Former chief executive officer of General Electric, Jack Welch, once said that you need to manage your own destiny, otherwise someone else will (Bateman and Snell, 2009:130). He also indicated that strategy is about clear-cut choices on how to compete (Hough, Thompson, Strickland, and Gamble, 2008:3). This is so true for all organisations today. Organisations are responsible for their own achievements. They must know what is happening out there and they must be able to compete, otherwise organisations may end up being a puppet in the hands of their competitors, suppliers, consumers and other role players.

Strategic management as a management process can be used to assist organisations to take charge of their destinies. This process helps organisations to create a clear sense of direction when taking into consideration the influences of their environments. Being aware of what is happening within their surroundings reduces the possibility of being exploited by others and the risk of the unknown; it also creates a clear direction for the future. Therefore, strategic management can also be described as a process whereby an organisation continuously considers its environment in order to ensure survival and growth (Rossouw, Le Roux and Groenewald, 2003:2).

Strategy is derived from the Greek word *strategos*, which means generalship, or the art of war. In the military environment the word is used to mean an art or plan to overpower the enemy (*The Concise Oxford Dictionary*, 1982:1052). In the business context it would mean to manage and overcome the influences in the business environment to create a competitive advantage over the competitors. (Thompson, *et al.*, 2010:7).

Various strategic management processes have been developed over the last few decades to assist organisations in their quest for success. However, these processes can mainly be divided into two broad phases, known as the strategic planning or formulation phase and the implementation or execution phase (Kamzi, 2008:1564). These processes must not, however, be used as blueprints or linear plans that need to be followed slavishly, but rather as frameworks which also allow for flexibility and creativity within the changing business environment (West, 2008:74).

The changing business environment of an organisation can mainly be divided into two categories, generally known as the external and internal environment. The external environment can be subdivided into the macroenvironment or remote environment and the industry or competitive environment. The internal environment is also known as the microenvironment (Hough, 2008:54; Smit, Cronjé, Brevis, and Vrba, 2007:60). However, for the purpose of this paper the terms ‘macroenvironment’, ‘industry environment’ and ‘internal environment’ will be used. A discussion on the macroenvironment follows.

Macroenvironment

Wheelen and Hunger (2008:73) refer to the macroenvironment as the societal environment and to the influences in this environment as the general forces that are present that do not directly influence the short-term activities of an organisation, but rather the long-term activities of an organisation. These forces include the economic, technological, political-legal and socio-cultural forces. David (2009:104-105) supports Wheelen and Hunger also refers to these influences as forces. In addition to the socio-cultural force, David adds the demographics and environmental forces, and with regard to the political-legal forces, governmental forces are added.

Authors such as Thompson, *et al.* (2010:57), Bateman and Snell (2009:53-58) and Pearce and Robinson (2007:84-92) identify similar influences within the macroenvironment. Thompson, *et al.* refers to these influences as factors or forces and Bateman and Snell refer to them as factors or elements. However, Pearce and Robinson call these influences factors. See table 1 for a comparison between the abovementioned authors.

TABLE 1
FACTORS, FORCES AND ELEMENTS WITHIN THE MACROENVIRONMENT

Thompson, <i>et al.</i> (Factors/forces)	Bateman and Snell (Factors/elements)	Pearce and Robinson (Factors)
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General economic conditions	Laws and regulations Economy	Economic factors Social factors
Legislation and regulations	Technology	Political factors
Population demographics	Demographics	Technological factors
Societal values and lifestyles	Social issues and the natural environment	Ecological factors International environment
Technology		

Sources: Thompson, *et al.* (2010:57), Bateman and Snell (2009:53-58) and Pearce and Robinson (2007:84-92)

Therefore, the common term used between these authors for the influences within the macroenvironment is factor. According to *The Concise Oxford Dictionary* (1982:346), a factor is described as a circumstance or an influence contributing to a result. This description supports the use of the word “factors” when referring to these environmental influences.

According to the classic approach to formulating strategy by Andrews (1971) and Christensen, Andrews and Bower (1977) in Porter (1980:xvii), the broadest level of formulating strategy involves the consideration of four key factors. These factors include the strengths and weaknesses of an organisation, the personal values of the key implementers, industry opportunities and threats and lastly the broader societal expectations. The first two factors are referred to as the internal factors and the latter two as the external factors. The concept of factor/s is therefore used to refer to all the internal and external influences of an organisation. In the modern context it would refer to all the influences within the internal and industry environments and macroenvironment.

Porter later identified the well-known five forces in the industry environment, which was a further development on the classic approach to strategy formulation (Porter, 1980:6). The concept of forces is still being used today and has replaced the concept of factors within the industry environment.

Taking the abovementioned into consideration, it would seem correct to refer to the influences within the macroenvironment as factors. A brief discussion on each of these factors will follow:

Economic factors

The economic factors include critical factors such as inflation rates, interest rates, tariffs, the growth of the economy and exchange rates. Other factors are unemployment rates, the availability of critical labour and labour cost (Carpenter and Sanders, 2009:111).

Social factors

Social factors refer to those factors, such as local languages, dominant religions, leisure time, age and lifespan demographics that are critical to any organisation. Other factors that need to be considered are attitudes towards consumerism, environmentalism and the roles of men and women in societies (Carpenter and Sanders, 2009:111).

Political and legal factors

Political and legal factors highlight the influence and role of government on strategy (Johnson, Scholes and Whittington, 2008:55). Relevant factors include trade agreements and legislation that may create both opportunities and threats for an organisation (Goldman, Maritz, Nienaber, Pretorius, Prilliad, and Williams, 2010:8).

Technological factors

Technological factors refer to revolutionary changes in technology. New discoveries, such as superconductivity and the internet as a national and international global economic engine, do have a definite impact on organisations today. Technology represents major opportunities and threats which need to be taken into consideration when formulating strategy (David, 2009:112-113).

Ecological factors

The ecological factors refer to the relationship between human beings, other living beings and the air, soil and water that support them. Specific issues that organisations must take into consideration in strategy which originate from this relationship are global warming, loss of biodiversity and habitat and air, land and water pollution (Pearce and Robinson, 2007:89).

Global factors

Global forces include factors such as new global markets, changing existing markets, important international events and cultural and institutional characteristics of global markets (De Bruyn and Kruger, 2005:55).

According to Thompson, *et al.* (2010:82-85), the political and legal factors (regulatory influences and government policy changes) and the social factors (changing societal concerns, attitudes and lifestyles) are part of the macroenvironment but these factors give rise to drivers in the industry environment. It is possible that other factors in the macroenvironment may also initiate drivers within the industry environment. However, the factors in the macroenvironment cannot be viewed as drivers, but only as initiators of drivers which are present within the industry environment.

Industry environment

The concept of the industry environment was propelled into strategic thinking and planning by Michael E. Porter and it is described as the conditions for competition that influences all organisations providing similar products and services (Pearce and Robinson, 2007:92).

However, Thompson, *et al.* (2010:60 & 80) distinguish mainly between competitive forces and general driving forces or drivers within the industry environment. The competitive forces are viewed as those forces which are present in industry determining the competitive pressures or level of competition in industry. The general drivers are defined as the common developments in the industry environment which are very powerful.

To have a clearer understanding of competitive forces and general drivers within the industry environment, a discussion on each will follow.

Competitive forces

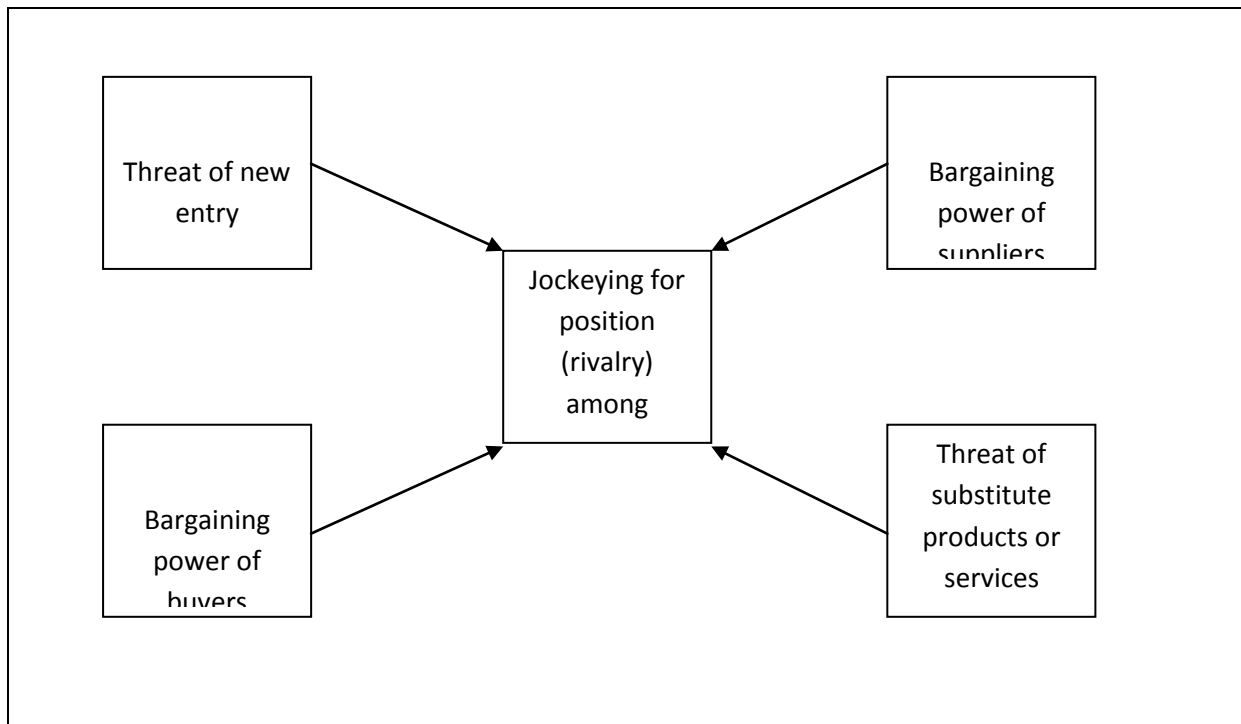
The competitive situation is never the same for all industries. Porter's five-forces model on competition (refer to figure 1) is widely used to determine and to assess the strength and importance of these forces in a market (Thompson, *et al.*, 2010:60). According to this model, the following five forces are present in an industry (Porter, 1998:22):

- Threat of new entry

New entrants bring new capacity, the desire to obtain market share and resources to an industry. This may cause a threat and existing organisations may have to rethink their strategies. However, barriers such as economies of scale, product differentiation, capital requirements, access to distribution channels and government policy may hinder new entrants to the market. In this case, a new entrant will not pose a serious threat.

FIGURE 1

THE COMPETITIVE FORCES WITHIN INDUSTRY ENVIRONMENT



Source: Adapted from Porter (1998:22)

- **Bargaining power of buyers**

Buyers in an industry can exercise their bargaining power by forcing prices down, demanding higher quality and more services and playing competitors off against one another. All this may be at the expense of industry profits. Buyers are becoming powerful if, for example, purchases are made in large quantities, products from industry are undifferentiated and products from industry represent only a fraction of the production cost of the buyer's product.

Bargaining power of suppliers: Suppliers can influence the industry profitability when raising prices or reducing the quality of goods and services purchased. Suppliers are viewed as powerful when an industry is, for example, dominated by few suppliers, the supplier's product is differentiated, there is little or no competition and the industry is not seen as important to the supplier.

- **Threat of substitute products or services**

Substitute products or services place a price ceiling on other products and services and limit the potential earnings and growth of an industry. Substitutes do not only limit the profit potential of an industry during normal times, but can also reduce higher profits in boom times.

- Jockeying for position (rivalry) among competitors

Rivalry exists among competitors in an industry. Competitors jockey for market position by using strategies such as product introduction, price competition and advertising slugfests. The intensity of competition increases when, for example, competitors are numerous and equal in size, growth in industry is slow, products and services lack differentiation, fixed cost is high, exit barriers are high and diverse strategies are present.

General industry drivers

To apply strategic management effectively it is important to understand the nature and intensity of the five competitive forces of Michael E. Porter on an industry. It is just as important to understand that the general industry conditions are volatile and subject to change. All industries are influenced by new developments and trends that may develop quickly or over time in order to create new industry situations which are viewed as important to necessitate a strategic response from organisations. A popular hypothesis is that industries progress through a life cycle. This life cycle comprises mainly an introduction, a growth, a maturity and a decline phase which to a certain extent explain change in industry. However, there are more causes for change in industry than the life cycle.

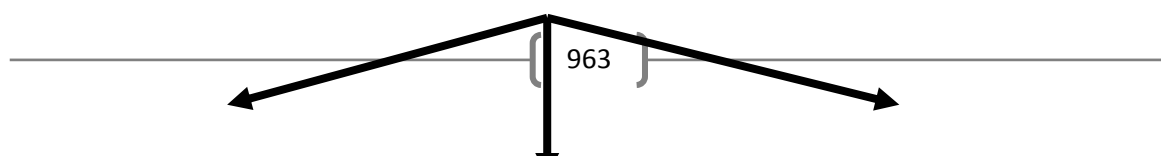
It is important to understand that change in industry is also present due to change agents pressurising certain industry role players or competitive forces such as competitors, buyers and suppliers to change their actions. The most powerful change agents are known as driving forces or drivers. They are the most powerful because they have the biggest impact on changing the industry environment and its competitive situation. *The Concise Oxford Dictionary* (1982:294) supports this view by describing a driver as receiving power directly and transmitting motion to other parts. Some of these drivers may even originate from the macroenvironment, but the majority stem from the industry environment (Thompson, *et al.*, 2010:79).

Refer to figure 2 for an illustration of the impact of drivers on the competitive forces within the industry environment. This illustration was developed from the literature review.

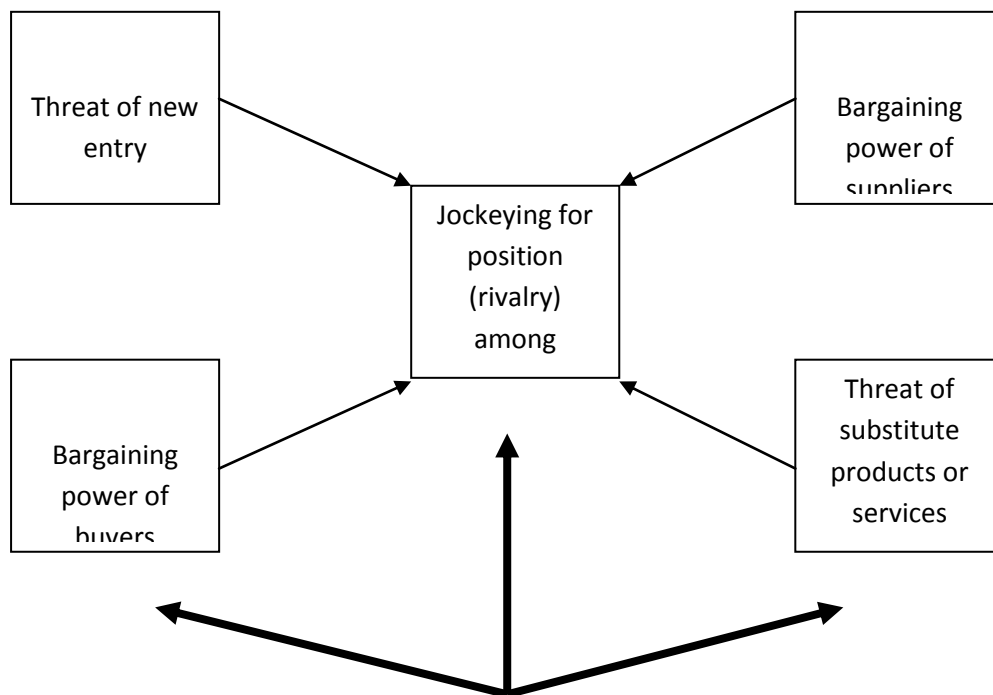
FIGURE 2

THE IMPACT OF DRIVERS ON THE INDUSTRY ENVIRONMENT

Changes in the long-term industry growth rate Increasing globalisation **Emerging new internet capabilities and applications** Changes in who buys the product and how they



use it **Product innovation** *Technological change and manufacturing process innovation*
Marketing innovation



Regulatory influences and government policy changes **Changing societal concerns, attitudes and lifestyles** *Entry or exit of major organisations* Diffusion of technical know-how *Changes in cost and efficiency* **Growing buyer preferences for differentiated products** *Reductions in uncertainty and business risk*

Some general industry drivers are unique, but most can be allocated into one of the following categories:

- Changes in the long-term industry growth rate

A movement in industry growth affects industry supply and buyer demand and determines the strength and character of the competition. An increase in buyer demand triggers a race among organisations to capture the new opportunities. A slow down or a down turn of buyer demand will intensify the competition or rivalry in the industry.

- Increasing globalisation

Competition moves from a regional or national level to an international or global level when organisations seek buyers in foreign markets or when production activities are established in countries with the lowest cost. Globalisation of competition starts when one or more of the organisations in an industry compete for a worldwide market leadership.

- Emerging new internet capabilities and applications

The growing acceptance of internet shopping, file sharing, high speed connections, Voice over Internet Protocol (VoIP) technology and the continuous growth of internet applications are major drivers of change in an industry.

- Changes in who buys the product and how they use it

Changes in buyer demographics and ways in which products and services are being used can change competition. For example, Apple's iPod and other MP3 players have changed how music is bought and played today.

- Product innovation

The competition in an industry has always been influenced by competitors or rivals trying to be first in introducing products or services. Continuous product innovation tends to attract first-time buyers while successful product innovation strengthens the position of the innovating organisations in the industry.

- Technological change and manufacturing process innovation

New technology can change an industry landscape dramatically by making it possible to manufacture better products or deliver better services at a lower cost. VoIP created low-cost, internet-based phone networks which compete with traditional telephone companies worldwide.

- Marketing innovation

Organisations which are successful in introducing new ways to market their products or services will always intensify competition in an industry and drive strategy revisions.

- Entry or exit of major organisations

The entry of a foreign or even a local organisation from another industry nearly always shakes up competitive conditions. The exit of a major organisation may also change the competitive structure by reducing the number of market leaders and may result in a rush to attract the exiting organisation's customers.

- Diffusion of technical know-how

Diffusion of technical know-how occurs when knowledge on how to perform a particular activity or a manufacturing process spreads to other organisations and the competitive advantage the original organisation may have diminishes. Technology transfers across the borders have been one of the reasons for industries to become globally more competitive.

- Changes in cost and efficiency

An increase or a decrease in costs (for example production and R&D costs) between competitors tends to change the competitive position between organisations within an industry dramatically.

- Growing buyer preferences for differentiated products

Buyer preferences and tastes may change over time and suppliers can attract these buyers by catering for the changing needs by offering differentiated products or services.

- Reductions in uncertainty and business risk

Developing industries are normally characterised by uncertainty and attract only risk-taking entrepreneurial organisations. Over time, when these industries prove to be sustainable, more conservative organisations would invest attractive growing industries.

- Regulatory influences and government policy changes

This driver originates from the macroenvironment of an organisation and it can drive competitive changes by allowing foreign organisations into the domestic market or by closing domestic markets to protect local organisations.

- Changing societal concerns, attitudes and lifestyles

Similar to the abovementioned, this driver also originates from the macroenvironment. New social issues, attitudes and lifestyles can be powerful agents of change which can alter the competitive pattern in an industry. Organisations which are quick to respond to the change in social issues, attitudes and lifestyles are usually in a favourable situation (Thompson, *et al.*, 2010:79-85).

Other drivers which are also present in the industry environment are listed in table 2. These drivers may overlap with the general industry drivers of Thompson, *et al.*

TABLE 2

OTHER DRIVERS WITHIN THE INDUSTRY ENVIRONMENT

Marr	Pike, Roos and Marr	Littler and Wilson
<ul style="list-style-type: none"> • Relational capital – licensing and partnering agreements, contracts, distribution arrangements and customer relations 	<ul style="list-style-type: none"> • Relational resources – regulators • Relational resources – customers, strategic alliances, market makers, influencers and local community 	<ul style="list-style-type: none"> • Slowing growth in mainstream markets • Technological developments • Importance of identifying fresh niche applications • Falling production costs • Rising R&D costs • Commoditisation of components and generic products • Demographics and lifestyle changes • Growing demand for integrated systems as opposed to discrete products or services • Increasing importance of voluntary collaborative arrangements and danger of enforced collaboration (i.e. acquisition)

Sources: Marr (2005:148-151), Pike, Roos and Marr (2005:112-115) and Littler and Wilson (1990:159 &177)

Internal environment

The internal environment refers to an organisation's strengths, weaknesses and profile of assets, skills, resources, technology, etc. and the personal values of the key implementers (Porter, 1980: xvii).

The classic approach to formulating strategy, as mentioned before, describes the influences of the internal environment as factors internal to an organisation. Several techniques have been developed over time to assist in analysing the internal environment, but all these techniques use different terminology when referring to the internal influences. The traditional SWOT analysis refers to the strengths and weaknesses within the organisation. The functional approach talks about the various functional areas of an organisation (Ehlers and Lazenby, 2007:92). The value chain identifies various activities within the organisation which create value. The resource-based view refers to assets, skills, capabilities and intangibles of an organisation (Pearce and Robinson, 2007:158 & 164).

According to the internal factor analysis summary (IFAS), all of the above terminology refers to internal factors. IFAS could be regarded as a summary of all the influences identified in the internal analysis techniques mentioned above (Wheelen and Hunger, 2008:129). The concept of internal factor is also in line with the classic approach and it falls within the description given in *The Concise Oxford Dictionary*. It would therefore seem correct to view internal factors as a collective noun for the terminology used in the other internal analysis techniques.

Important to note is that Ehlers and Lazenby (2007:216) also identify the following drivers within the internal environment of the organisation to steer strategy implementation in the right direction:

- Leadership
- Organisation culture
- Rewards systems
- Organisational structure
- Resource allocation

Thompson, *et al.* (2010:329-331) refer to these drivers as components of strategy execution which include the following:

- Competencies, capabilities and resources

- Budgets and resources
- Policies and procedures
- Best practices and continuous improvement
- Information and operating systems
- Rewards and incentives
- Corporate culture
- Leadership

Michael E. Porter (2003:59) said during a workshop presented in South Africa that strong leadership by the CEO is almost a necessity for strategic success and the greatest barriers to strategy are mainly self-imposed and internal. These internal barriers he is referring to are management ideas, cost systems, information technology, organisational structure, decision-making processes and management incentives. When comparing these barriers to the drivers of Ehlers and Lazenby and the components of Thompson, *et al.*, some overlap can be observed.

However, these drivers as identified by Ehlers and Lazenby are not the same as the general industry drivers. Their focus is mainly on successful strategy implementation while the concept of drivers refers mainly to powerful change agents which alter the competitive situation in a specific industry.

RESEARCH METHODOLOGY

This is a conceptual paper reflecting the results of secondary research in the form of consultation of relevant articles, journals and textbooks on the topics of strategic management and drivers.

FINDINGS

The literature review revealed the following findings on drivers, forces and factors:

Drivers are actually only present within the industry environment. Although the word 'drivers' may be used to describe other concepts, the more correct reference would be to use it to describe the most powerful agents of change in an industry. These drivers directly influence the competitive forces or the competitive situation within the industry environment. The word 'forces' is also used to describe the influences within the macroenvironment, but the more suitable reference to forces would be to the five competitive forces of Michael E. Porter.

Although different terminology such as forces and elements may be used to describe the influences within the macroenvironment, factors is the more appropriate word to use and this is also supported by the classic approach to formulating strategy and *The Concise Oxford Dictionary*. However, some of these factors such as the political, legal and social factors may be the spawning place for drivers in the industry environment.

Various techniques are used to analyse the internal environment of an organisation. In using these techniques, different terminology is used to describe the influences within the organisation. However, according to IFAS, the classic approach and *The Concise Oxford Dictionary* collectively, these influences are known as factors or more specifically as internal factors.

Refer to table 3 for a list of drivers, forces and factors within the business environment.

**TABLE 3
DRIVERS, FORCES AND FACTORS WITHIN THE BUSINESS ENVIRONMENT**

Drivers	Forces	Factors
<ul style="list-style-type: none"> • Changes in the long-term industry growth rate • Increasing globalisation • Emerging new internet capabilities and applications • Changes in who buys the product and how they use it • Product innovation • Technological change and manufacturing process innovation • Marketing innovation • Entry or exit of major organisations • Diffusion of technical 	<ul style="list-style-type: none"> • Threat of new entry • Power of buyers • Bargaining power of suppliers • Threat of substitute products or services • Jockeying for position (rivalry) among competitors 	<p>External factors</p> <ul style="list-style-type: none"> • Economic • Social • Political and legal • Technological • Ecological • Global
		<p>Internal factors</p> <ul style="list-style-type: none"> • Strengths and weaknesses • Functional areas • Activities • Assets, skills, capabilities and intangibles

<p>know-how</p> <ul style="list-style-type: none"> • Changes in cost and efficiency • Growing buyer preferences for differentiated products • Reduction in uncertainty and business risk • Regulatory influences and government policy changes • Changing societal concerns, attitudes and lifestyles • Importance of identifying fresh niche applications • Falling production costs • Rising R&D costs • Commoditisation of components and generic products • Growing demand for integrated systems as opposed to discrete products or services • Increasing importance of voluntary collaborative arrangements and danger of enforced collaboration 		
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<ul style="list-style-type: none"> • Relational capital – contracts, distribution arrangements and customer relations 		
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CONCLUSIONS

It became evident from the literature review that the concepts of drivers, forces and factors are sometimes used interchangeably. The primary objective of this paper was to define drivers, forces and factors and to differentiate drivers from forces and factors within the business environment. The paper has succeeded in separating these concepts and it would be correct to say that drivers, forces and factors are related but not the same.

Drivers, which may even originate from the macroenvironment, are the most important change agents present within an industry. The concept of forces refers mainly to the five competitive forces of Michael E. Porter, while factors are the influences present within the macroenvironment and the internal environment of an organisation.

RECOMMENDATIONS FOR MANAGERS

Managers will have to differentiate drivers from factors and forces within the business environment of organisations. The reason for this is that drivers are the most important change agents within an industry and directly influence the competitive forces such as competitors, buyers and suppliers. Managers must also take note that some of these drivers may be initiated by the macroenvironment, but the majority stem from the industry environment of the organisation (Thompson, *et al.*, 2010:79).

The early identification of and the adaption to these drivers are very important because this can provide organisations with a competitive advantage. However, organisations are most often paralysed by inertia, whereas the situation could have been avoided if managers had committed themselves to these experiences earlier (Littler and Wilson, 1990:159).

To be able to only identify the drivers is not enough. Managers must determine whether the drivers collectively make an industry more or less attractive. In order to determine the collective impact, each driver must be assessed separately because they might not all steer in the same direction. Some drivers may even be stronger than others, which will influence the net collective effect of the drivers.

After assessing the collective effect of the drivers, managers need to formulate or adjust strategies to deal with the impact of the drivers. The impact of the drivers may result in a decrease in market demand, an increase in competitive intensity and a possible lower industry profitability. Without knowledge of the drivers present within the industry environment, organisations will not be well-equipped to formulate strategies that could create a sustainable competitive advantage.

However, while there may be many change agents present in an industry, only three or four are likely to be real drivers which will actually change the industry. Therefore managers will have to resist the temptation to label every change as a driver (Thompson, *et al.*, 2010:85-86).

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DETERMINANTS OF CAPITAL STRUCTURE OF SMALL AND MEDIUM ENTERPRISES IN THE BUFFALO CITY MUNICIPALITY, EASTERN CAPE PROVINCE, SOUTH AFRICA

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ABSTRACT

The study investigated the determinants of capital structure of small and medium enterprises (SMEs) in the Buffalo city municipality. The objectives were, to ascertain whether the use of internal equity was positively or negatively related to the size, age and profitability of the firm. The study also examined if the use of external equity was negatively or positively related to the age, size and profitability of the firm. Finally the study established if the use of debt was positively or negatively related to the size, age and profitability of the firm. To achieve these objectives, the study hypothesised that age, size and profitability were determinants of capital structure. The study also hypothesised that use of retained profits, external equity and debt by SMEs was negatively related with age, size and profitability. Results revealed that size, age and profitability of the firm were some of the determinants of capital structure.

INTRODUCTION

Small and Medium Enterprises (SMEs) represent a vast portion of the population of firms of almost every country. They are defined as separate and distinct entities including cooperative enterprises and non-governmental organisations managed by one or more owners, including its branches or subsidiaries and are predominantly carried out in any sector or sub sector of the economy (National Small Business Act of South Africa of 1996).

SMEs remain the backbone of virtually all economies of the world. They are the foundation of socio-economic stability, gender and minority-gap empowerment and equitable distribution of opportunities and incomes across the world (Zingales, 2000:1623).

SMEs dominate both developed and developing economies in terms of employment creation and yet their full potential remains untapped. These trends need to be changed since SMEs have positive contribution to economies. This is important in order that economic objectives and social objectives (poverty alleviation and improving standards of living) can be realised. In South Africa SMEs contributes fifty six percent (56%) of the private sector employment and thirty six percent (36%) to the gross domestic product (GDP). GDP is defined as the total market value of all final goods and services produced within the country in a given period of time (Glen, 2004). This implies a very high labour absorption capacity and highlights the job creation potentials of this sector and its importance to the reduction of the unemployment in South Africa (Ntsika, 2002).

Despite the important contributions of SMEs to the economy as analysed above, the failure rate of SMEs in South Africa is very high, with about ninety percent (90%) of SMEs failing within the first few years of operation (Glen, 2004). Various challenges and impediments prevent SMEs, especially in South Africa, from growing to their full potential. The access to the formal sector financing is often a major handicap to their development, particularly in the early growth stages (Glen, 2004:45).

Zingales, (2000:1629) has argued that: “empirically, the emphasis on large firms has led us to ignore (or study less than necessary) the rest of the universe: the young and small firms, who do not have access to public markets”. In effect, there have been many empirical studies about financial decisions of large and listed firms relative to those for SMEs. It is very important to shed some light on the capital structure that is the way a company finances itself through some combination of equity and debt in view of their importance to the South African economy. Rajan & Zingales, (2004:143) indicate that the capital structure of listed and large firms may be of importance to the financial community but the interests of academics are broader. Academics are interested in studying the whole universe of firms not only large firms. Consequently, corporate finance that applies to large firms may not hold for SMEs. Barbosa and Moraes, (2004:15) suggested that one of the reasons why SMEs have not been thoroughly studied is that they have always posed methodological difficulties in research. SMEs that are not listed on the Stock of Exchange are not obliged to publish annual financial statements that can be used to analyse their performance. Hence, it is important to study the determinants of capital structure of SMEs.

The determinants of capital structure are either quantitative or qualitative. The quantitative determinants are the factors that can be explained in numerical values, such as size, asset structure, profitability, volatility of earnings, risk, age of the firm and collateral amongst other values. On the other hand the qualitative determinants give detailed descriptions about experiences, attitudes, beliefs and thoughts of the respondents in question. The qualitative determinants of capital structure encompasses; culture, need for control, risk propensity, experience, social norms, and personal worth. The study at hand concentrated on selected quantitative determinants of the capital structure. The researcher selected quantitative factors since empirical studies pertaining the developed countries and large firms concentrated on these. It was therefore convenient for the researcher to compare the results of this study with previous studies when testing for consistency. Secondly, the quantitative data could allow easier data analysis especially by testing for significance as well as presenting results graphically and comparing measures of dispersion and central tendency.

Studies of capital structure in the SME sector in South Africa are virtually non-existent (Glen, 2004:45). This is the fundamental motivation of this study. Hence, an understanding of the determinants of capital structure in the SME sector will contribute greatly capital structure puzzle.

The objective of this study was to investigate empirically the selected determinants of SMEs' capital structure based on well known capital structure theories. A set of theories such as the Static Trade-Off theory of capital structure, (refer. Sec.1.6 p.8), Modigliani & Miller, (1963:261), (ref. sec. 1.6 p.7), the Pecking Order theory (Myers, 1984:575) (ref. sec.1.6 p.8) and The Agency theory (Jensen & Meckling, 1976:360) (ref.sec.1.6 p.9) have attempted to understand and explain the capital structure of firms. However, most of these theoretical and empirical works on capital structure focus on large firms and more recent attempts to generalise these capital structure theories have put the empirical focus on other contexts, especially SMEs.

The following section will address the nature of the problem.

1.2 STATEMENT OF THE PROBLEM

The small and medium business sector is seen as an important force in generating employment, income distribution, to advocating competition, exploit niche markets, enhance productivity and technical change, and thereby stimulate economic development. However,

SMEs suffer from a high failure rate, with about ninety percent (90%) failing within the first few years of operation; access to finance being the major reason for the failure (Boateng, 2004:66).

Financing and structure of the capital base of a firm is a problematic and important issue. Without capital the firm would be unable to run, grow and expand. This study proposes three financing alternatives were mainly discussed namely, internal equity (retained earning), debt from credit institutions and external equity (capital from owners).The last cited the most common source of finance used by SMEs. This research analysed the extend to which the theories of finance were applicable to the companies' decision-making process of capital structure. The key is for firms to choose a portfolio of capital structure that will maintain sustainability and increase owners' wealth. In practice, it is observed that financial managers use different combinations of debt and equity. A practical question therefore is: What motivates them to do so? More fundamental question to be answered is what determines the capital structure of firms: This study tried to answer these questions by shedding some light on the capital structure decisions of SMEs.

Studies of capital structure in the SME sector of South Africa are very few, which was the fundamental motivation of this study. Extensive research has been done on large firms, but yet there is no magic combination of equity and debt for companies to apply. For instance studies by Negash, (2001:114) and (2002:119) concentrated on large firms, especially those listed on the Johannesburg Stock Exchange. Negash, (2001:114) also found that the potential gain from leverage by large firms in South Africa was significant and comparable with the gains by firms in North America as proposed by Modigliani and Miller, (1963). However, no extensive study has been done on the determinants of capital structure of SMEs in South Africa. Therefore, the study at hand examined selected determinants of the capital structure of SMEs.The capital structure was broken down into several components which form the capital such as retained earnings, external equity (capital from owners) and debt so as to analyse each individual factor of capital structure. Testable hypotheses were formulated based on these components of capital structure.

Having formulated the statement of the problem statement of the study, the objectives of the study can now be indentified.

1.3 OBJECTIVES OF THE STUDY

- To ascertain whether the use of internal equity (retained profits) is positively or negatively related to the size, age and profitability of the firm;
- To examine if the use of external equity (capital outside the business) is negatively or positively related to the age, size and profitability of the firm;
- To establish if the use of debt is positively or negatively related to the size, age and profitability of the firm.

Having identified the objectives of the study, tentative solutions to problems at hand can be formulated. Section 1.4 outlines the research hypotheses.

1.4 RESEARCH HYPOTHESES

Hypothesis derived from the 'Pecking Order Theory' (refer sec1.6 p 9).

H₀ .The use of retained profits by SMEs is negatively related with the age, size and profitability of the firm

H₁ . The use of retained profits by SMEs is positively related with the age, size and profitability of the firm

H₀ -The use of external equity by SMEs is negatively related with the age, size and profitability of the firm

H₂ -The use of external equity by SMEs is positively related with the age, size and profitability of the firm

Hypothesis derived from 'Trade Off Theory' (refer sec1.6 p 6)

H₀ -The use of debt by SMEs is negatively related to the size, age and profitability of the firm.

H₃ -The use of debt by SMEs is positively related to the size, age and profitability of the firm.

Section 1.5 will provide an insight into the significance of the study at hand.

1.5 SIGNIFICANCE OF THE STUDY

The purpose of this research was premised on the notion that SMEs have a major role to play in the South African economy. The study shall provide solutions and strategies being adopted to decrease the rate of failure of SMEs in South Africa which is necessary to

increase the levels of employment and economic growth in the country. Capital structure is important to the success or failure of SMEs.

The study will also be a valuable source of information to policy makers in the SME sector as they need such information in setting up policies. This research mainly contributes to the empirical literature on the factors that determine the capital structures of SMEs in South Africa. Therefore, this study tried to look at what drives SMEs when making capital structure decisions, and thereby contributing to available empirical literature on the debate in South Africa.

1.6 LITERATURE REVIEW

The term 'capital structure' can be defined as the relative amount of debt and equity employed to finance a firm's operations (Glen, 2004:385). It must be noted that, in finance, capital structure has been a hotly debated issue by researchers for years (examples of these researchers are Jensen and Meckling, (1976); Myers, (1977); Boateng, (2004); Abor, (2005); Coleman, (2001) to mention a few). One of the earliest important sources on capital structure is the classical work of Modigliani and Miller (1958 & 1963). Their analysis of the irrelevance of capital structure to firm value is based on the premise that capital structure does not affect a firm's cash flow. Indeed, in their paper, Modigliani and Miller, (1958) show that the financing decisions of firms do not affect their value. Their conclusions, however, is based on what is termed 'restrictive and unrealistic' assumptions such as a world with perfect capital markets, absence of corporate and personal taxes, and independent firm's financial decisions. Adapting these assumptions to reality and repeating the analysis suggests that capital structure decisions do affect a firm's value. Modigliani and Miller, 1958 therefore revised their initial stance in 1963. Consequently, several studies have shown that capital structure significantly affects the value of a firm (Jensen and Meckling, (1976); Myers, (1977); Boateng, (2004); Abor, (2005); Coleman, (2001)).

Following on from the pioneering work of Modigliani and Miller, (1958) on capital structure, three differing theories of capital structure have been developed. They are namely: Static Trade-Off, Pecking Order, and Agency Cost Theories.

The Static Trade-Off Theory of capital structure by Jensen and Meckling, (1976) (also referred to as the tax based theory). The theory states that optimal capital structure is obtained where the net tax advantage of debt financing balances leverage related costs, such as financial distress and bankruptcy, holding firm's assets and investment decisions constant. In view of this theory, issuing equity means moving away from the optimum and should therefore be considered a bad move. According to Myers, (1984), firms adopting this

theory could be regarded as setting a target debt-to-value ratio with a gradual attempt to achieve it. Myers, (1984), however, suggests that managers will be reluctant to issue equity if they feel it is undervalued in the market.

Pecking Order Theory which is also referred to as the information asymmetry theory proposed by Myers, (1984) states that firms prefer to finance new investment, first internally with retained earnings, then with debt, and finally with an issue of new equity. Myers, (1984) argued that an optimal capital structure is difficult to define as equity appears at the top and the bottom of the 'pecking order'. Internal funds incur no flotation costs and require no disclosure of the firm's proprietary financial information that may include firm's potential investment opportunities and gains that are expected to accrue as a result of undertaking such investments. The Pecking Order Theory tries to explain why most profitable firms use internal financing. The easy reason for this is that they do not need to make use of external funding. However, the other extreme, which are businesses with less profits do not possess enough internal capital and have to seek for external funding (Myers, 1984). Hutchinson, (2004:232) points out that the more business owners are willing to risk, the higher the possible profits. The pecking order approach appears relevant for small businesses since costs associated with external financing are higher for small firms than for large businesses (Chittendale, Hall and Hutchinson, 2000:59). Berger and Udell, (1998:615) and others suggest that more severe information asymmetry among SMEs could lead to pecking order behaviour because outside financiers, in order to makeup for the increased risk caused by poor information and the inability to monitor the entrepreneur's behaviour, will demand higher return rates. Thus, SME owners will prefer internal financing over external financing. Once internal sources are exhausted, the preferred solution to the information asymmetry problem is to apply for a loan with a bank with which the firm has an existing banking relationship. These issues are thought to soften with age and size, as the firm generates greater evidence and a greater ability to clearly communicate its quality.

The Agency Cost Theory of Capital Structure states that an optimal capital structure will be determined by minimising the costs arising from conflicts between the parties involved. Jensen and Meckling, (1976) argue that agency costs play an important role in financing decisions due to the conflict that may exist between shareholders and debt holders. If companies are approaching financial distress, shareholders can encourage management to take decisions, which, in effect, expropriate funds from debt holders to equity holders. Sophisticated debt holders will then require a higher return for their funds if there is potential

for this transfer of wealth. Debt and the accompanying interest payments, however, may reduce the agency conflict between shareholders and managers. Debt holders have legal right if management fails to make interest payments when they are due. Hence managers concerned about potential loss of job, will be more likely to operate the firm as efficiently as possible in order to meet the interest payments, thus aligning their behaviour closer to shareholder wealth maximisation.

The theories above have been used to explain the capital structure of firms. In the existing literature, both internal and external variables have been identified as relevant in influencing a firm's capital structure. These variables include firm size, profitability, risk level, type of industry, tax shield, profitability margin, firm growth, whether a firm receives subsidy, ownership control and asset tangibility. As mentioned above, most studies on the capital structure of firms concentrate on large and listed firms in advanced economies. This study concentrated on three key variables on the capital structure theories in order to establish their relevancy in the South African context.

USE OF INTERNAL EQUITY (RETAINED EARNINGS) VERSUS SIZE, AGE AND PROFITABILITY

According to the Pecking Order Theory (POT), when financing investment projects, firms seek to use sources of funds least susceptible to undervaluation due to information asymmetries. The POT predicts that firms have a preference to finance investments projects with internal equity. When internal funds are exhausted, they use debt financing before resorting to external equity. There are relatively greater information asymmetries and the higher costs of external equity for SMEs. Barton, (2001:25) suggests that the POT is an appropriate theoretical approach for the SME sector. Empirical evidence suggests that SME owners source their capital as follows: SME owners try to meet their financing needs from a pecking order of, first, their "own" money (personal savings and retained earnings); short-term borrowings; longer term debt; and, least preferred of all, from the introduction of new equity investors.

The supply of finances depends on many factors, including the stage of developing or life cycle of the firm. As the size and age of the firm are inextricably linked, a number of issues are correlated. Firstly, start-up and early stage firms are generally smaller than mature and older firms, and have a greater proportionate reliance on the personal financial resources of

the firm owner. If the firm is successful as it grows and matures, retained profits are reinvested in current and capital projects, augmenting personal sources of funding. A continued preference for internal equity increasingly relies on accumulated retained profits as the firm survives and matures. Furthermore, higher profits increase availability of internal equity which means the more profitable a firm is the higher the chance of using internal equity. Consistent with Myers' (1984) POT, we proposed the hypothesis: *“The use of retained profits by SMEs is positively related with age and size and profitability of the firm”*

USE OF EXTERNAL EQUITY VERSUS AGE OF THE FIRM

Start-up and early stage firms face particular difficulty in sourcing finance for investment for a number of reasons. Firstly, internal equity is limited as sufficient profits may not be generated, and the personal resources of the firm owner and his family are limited. Secondly, a combination of information asymmetries and agency problems related to the lack of a trading history restricts access to external debt, which may be exacerbated by lack of collateralisable assets. For these reasons, start-up and early stage firms may resort to external equity particularly private investors and may attract funding from venture capitalists, especially firms with high growth potential. Government grant schemes and tax incentive equity schemes may also be important sources of external equity financing for fledging firms, especially in strategically targeted sectors (e.g. high-tech). Therefore, as the firm grows it will be more profitable. Hence there will be no use of external equity since it will make use of its profits. Thus we proposed the hypothesis: *“The use of external equity is negatively related with age”*

USE OF EXTERNAL EQUITY VERSUS FIRM SIZE

Venture capitalists typically invest in the firms with high-growth potential, investing at a stage when a product or service has been pre-tested. Venture capital investment is generally positively correlated to the size of a firm, as a high rate of return is required in a relatively short period of three to eight years (Delcours, 2006:25). Firms sourcing additional venture capital funding have typically received previous equity funding, and have grown past start-up size. The Pecking Order Theory suggests that larger firms exhibit lower information asymmetry and are therefore able to issue more equity as compared to small companies. Therefore, we proposed the hypothesis: *“The use of external equity is positively related with size”*

USE OF EXTERNAL EQUITY VERSUS PROFITABILITY

Profitability could also affect the decision to use external equity. As the firm gets higher profits it increases the availability of internal equity. Accordingly, profitable industries, because of the greater availability of internally generated funds related to their high profitability tend to have lower external equity in their capital structure. Therefore, we proposed the hypothesis: *“The use of external equity is negatively related with the profitability of the firm”*

USE OF DEBT VERUS FRIM SIZE

Firm size is also an important factor in accessing debt finance. There are a number of reasons for this. Firstly, it may be relatively more costly for smaller firms to resolve information asymmetries with debt providers. Consequently, smaller firms may be offered less debt capital or capital at higher costs than large firms (Cassar and Holmes, 2003). Secondly transaction costs are typically a function of scale and may be higher for smaller firms (Hamilton & Fox, 1999:232). Thirdly bankruptcy costs and the size are inversely related. Cosh and Hughes, (1999) propose that this predisposes smaller firms to use relatively less debt than large firms. From a financial distress perspective, larger firms tend to be more diversified and fail less often, so size can be an inverse proxy for the probability of bankruptcy. Likewise, small companies usually have bigger bankruptcy costs in relative terms. Hutchinson, (2004:712) found a positive association between firm size and long-term debt. Under these assertions, we can constructed our Trade–Off Theory hypothesis in the following manner: *“Firm size should be positively related to debt level”*

USE OF DEBT VERSUS FIRM AGE

Firms at the start-up stage typically experience the greatest informational opacity problems, and may not have access to debt financing. As a firm becomes established and develops a trading and credit history, reputation effects alleviate the problem of moral hazard, facilitating borrowing capacity. Additionally, as the firm grows it will have accumulated assets as debt collateral in the form of inventory, accounts receivable and equipment (Berger and Udell, 1998:643). The firm may also have increase fixed assets in the form of land and buildings on which it may secure mortgage finance. Long term debt is typically secured on colleteralisable fixed assets, and consequently its maturity matches the maturity of the pledged asset. Therefore, the use long term of debt is expected to increase initially, and decrease at a later

stage as the long term debt is retired and the firm can rely increasingly on accumulated profits. Older firms exhibit smaller debt ratios than their younger counterparts. Therefore, we proposed *“The use of debt is positively related with age”*

USE OF DEBT VERUS PROFITABILITY

Profitable firms, that have access to retained profits, can rely on it as opposed to depending on outside sources. A firm with a high profit rate, *ceteris paribus*, would maintain a relatively lower debt because of its ability to finance itself from internally generated funds. Cassar and Holmes, (2003), Esperance, Gama and Mohamed, (2003:62) and Hull and Robert, (2004:45) suggested a negative relationship between profitability and both long-term and short-term debt. They agree that firms with high profit rates, all things being equal, would maintain relatively lower debt ratio since they are able to generate such funds from internal sources. Use of external funds is very much related to profitability on the basis that SMEs, particularly if they are not listed, will make use of internally generated funds as a first resort, i.e. those which make use of external funds will be those with a lower level of profit. The theory's application to SMEs implies that external equity finance issues may be inappropriate. The more profitable firms are the lesser the use of debt. Therefore we proposed *“The use of debt is negatively related to profitability”*

While the field of empirical capital structure studies is very actively researched, (Al-Sakran, (2001), Barclay *et.al.*, (2000), Barton, (2001), Bates, (1999) and Boateng, (2004) to mention a few) the large majority of studies have been conducted on samples of large firms. The relative shortage of research into private small firm capital structure is troubling because small firms provide about half of private sector employment and produce about half of private sector output in the South Africa. Even their aggregate importance as users of financing has recently surpassed that of better-known large-firm markets (Barclay, Smith & Natts 2000:30). Small firms face a very different financial market compared to large public firms. Due to the dominance of private equity financing and bank lending in the field, small business owners face less competitive, perhaps less information ally efficient, and therefore more restrictive financial markets (Berger and Udell, 1998:616).

Studies of capital structure in the SME sector are virtually non-existent, which is the fundamental motivation of this study. Thus, an understanding of the capital structure in the SME sector will contribute greatly to the on-going debate about capital structure. Are those determinants of capital structure in studies of large and listed firms applicable to SMEs? Do SMEs in developing countries such as South Africa exhibit the capital structure that

conforms to standard finance theories? These are some of the questions this study seeks to answer.

The theories presented above shed some light on the capital structure decision making process of SMEs. They identified a large number of attributes influencing a firm's capital structure. The study at hand attempted to apply these theories of capital structure in the small business sector.

1.7 METHODOLOGY AND RESEARCH DESIGN

Research methodology refers to the way in which data is gathered for a research project. It is the blue print for the collection, measurement, and analysis of data in order to achieve the objectives of the research project (Churchill, 1998:203). This section will provide an introductory discussion on the research methodology and design strategy to be used in the study and will focus on the research instrument, research technique, secondary data, the survey area, and population, sample size, sampling technique and data analysis procedures. The study used a quantitative research design.

1.7.1 Research instrument

The research instrument was a questionnaire; A questionnaire is a form containing a set of questions, especially one addressed to a statistically significant number of subjects as a way of gathering information for a survey (Martins, 1999:260).The questionnaire used herein consisted of open-ended questions, Likert scale and closed-ended questions. An open-ended question is a question in a questionnaire that allows respondents to respond in their own words whilst a closed ended question provides the respondents with different options. On the other hand a Likert scale is a scale in which respondents indicate their level of agreement with statements that express a favourable or unfavourable attitude toward a concept being measured (Cooper and Schindler, 2003:362).

1.7.2 Research technique

The research technique used to collect primary data was the self-administered questionnaire. A self-administered questionnaire is a form containing a set of questions, usually presented to the respondent by an interviewer or a person in an official capacity that explains the purpose but does not actually complete the questionnaire (Cooper and Schindler, 2003:369). This technique reduced interview bias and saved time and money. Data was collected within a short period of time because many respondents could answer the questionnaire at the same time. The researcher was only present to assist in explaining ambiguities rather than asking questions herself.

1.7.3 Secondary data

Various sources of secondary data were used such as literature review of available published material. This included journals, books, conference reports, internet sources, and masters' dissertations relating to capital structure and financing decisions of SMEs. Other relevant sources of information such as published data obtained from Statistics South Africa and the NTSIKA Enterprise promotion Agency were also assessed and deductively applied. Responses to the questionnaire were analysed and evaluated using techniques such as tabulation, correlation and statistical graphs.

1.7.4 The survey area

The research covered the retail firms of the Buffalo city Municipality in the Eastern Cape Province of South Africa. The city is situated on the Indian Ocean coast, between the Buffalo River, and the Nahoon River, and is the country's only river port. Buffalo city has a population of approximately 250,000, with over 700,000 in the metropolitan area (South Africa GIS map). The locations were chosen for their diverse retail activities. East London is the second largest industrial centre in the province amongst others including industries such as clothing, textiles, pharmaceuticals and food processing. The researcher also chose this area because of its proximity to the university and also the fact that it has a relatively large number of manufacturing firms from observation.

1.7.5 Population

To identify the survey population of the SMEs in the study area the researcher contacted the Small Enterprise Development Agency (SEDA). The population of the SMEs is 412.

1.7.6 Sample size

Sample size was calculated using the following formulae (Roberts-Lombard, 2002:87).

$$n \geq \frac{N}{1 + N(dxd)}$$

10 000

n = The sample size

N = The total population

d = Sample interval

The sample size was calculated from a population of 412 SMEs giving a sample size of 200 firms.

1.7.7 Sampling technique

The sample was selected using the simple random sampling technique. Simple random sampling is the basic sampling technique where we select a group of subjects (a sample) for study from a larger group (Cooper and Schindler, 2003:164). Each individual owner or manager of the SME was chosen entirely by chance and each member of the population had an equal chance of being included in the sample. Every possible sample of a given size had the same chance of selection; i.e. each member of the population was equally likely to be chosen at any stage in the sampling process.

1.7.8 Data analysis Procedure

The data analysis procedure was done by the Statistics department at the University of Fort Hare. The statistical package was the Statistical Analysis System V8 (SAS). The packages Statistica and Statistical Package for Social Sciences (SPSS) were used for the analysis of graphs. The statistical method which was used to analyse the data was the Chi-Square test for independence. The Chi-Square test for independence was used to test for association. Multiple linear regressions were also used to measure the relationships between the independent and dependent variables. The correlation was also used to analyse the relationships as well as descriptive statistics such as the mean, mode, median and the frequency distribution graphs.

1.7.9 Regression model

The regression model results in a prediction equation also described as regression equation. The equation describes the relationship between the dependent variables and independent variables (Gujarati, 2000).

$$Y = \beta_0 + \beta_1 \text{ PROFITABILITY} + \beta_2 \text{ SIZE} + \beta_3 \text{ AGE} + \text{Er} \dots \dots \dots 1$$

Where:

Y is the source of finance which was the dependent variable. The sources of finance were debt, internal equity (retained earnings) and external equity. Debt was measured using the debt ratio calculated as total debt

Total assets

Internal equity (retained earnings) was measured as the sum of a company's profits, after dividend payments, since the company's inception.

External equity was measured as the total amount of capital contributed from external sources other than banks.

β is the coefficient value which measures the rate of change in the value of dependent variables per unit change of the independent variable.

Profitability represented the independent variable and it was measured by return on equity. Similar studies such as Mesquita and Lara, (2003) also used return on equity as a measure of profitability in their study.

Size of the SMEs also represented the independent variable and it was measured by the total number of employees.

Age of the firm also represented the independent variable and it was measured by the number of years the firm has been operating.

E_r is the error term which represented all those forces that affected the dependent variables besides the independent variables, but not explicitly introduced in the model (Gujarati, 2000:25)

1.8 RESULTS

Demographic profile

The personal demographic profile of the sample showed that there were more males than female respondents. In terms of business demographics, the majority of the SME respondents indicated that their businesses were in the clothing sector.

Using the Chi-Square, T-test and ANOVA procedures, the study tested and accepted or rejected the following propositions: (the sequence will follow from the first hypothesis, second hypothesis and lastly the third hypothesis).

The use of retained profits by SMEs is negatively related with age, size and profitability of the firm

The purpose of the study was to establish if the use of retained profits had a positive or negative relationship with age, size and profitability of the firm. The results of the regression analysis indicated that use of retained earnings had a positive relationship with the three variables age, size and profitability of the firm.

Statistically the hypothesis was tested with the aid of questions 12-17 in the research instrument. The results obtained confirmed a significant positive relationship between retained profits and the three variables. Therefore the null hypothesis namely the use of

retained profits by SMEs is negatively related with age, size and profitability of the firm was rejected.

These results were consistent with the Pecking order theory which formed the basis of this study. The theory states that firms tend to follow a certain hierarchy when choosing a source of finance. Therefore, the Pecking order Theory predicts a positive relation between firm profitability and use of retained earnings. Van der Wijst and Thurik, (1999:55) suggested that owner-managers prefer to use internal sources of capital rather than equity or debt finance when their businesses are profitable. Myers (1984) argued that profitable firms prefer to fund their operations with internal equity. In line with this view, Van der Wijst and Thurik, (1999:55) found that profitability and retained earnings are positively related to retained earnings is to maximize the long-term value of their business. The findings of the second hypothesis are discussed in the next section.

The use of external equity by SMEs is negatively related with age, size and profitability of the firm

Questions in section A and D in the research instrument (questionnaire) gave responses that were used to test the second hypothesis. The equity ratio, representing the external equity came from section A. Using a regression analysis, it was found that profit, size and age have negative relationship with the use of external equity. Therefore we did not reject the null hypothesis which stated that the use of external equity by SMEs is negatively related with age, size and profitability of the firm.

The results were consistent with those of Cressy and Olofsson, (1999:179) who found that SMEs do acquire additional external equity capital. They however, found that younger and lower quality firms were more likely to acquire additional external equity than large firms since smaller firms do not have profits to retain.

Bates, (1999) also found that when compared with older and more established businesses, younger firms rely less on profits derived from sales, therefore they use external equity to sustain their business. However, as firms grow and mature, different types of debt arrangements (first short-term, then long-term) become important.

Schmid, (2001:24) also concluded that SMEs face a lot of difficulties when accessing finance, hence these firms are more dependent upon owner loans, internal equity, trade credit and angel financing. They further concluded that as firms mature they tend to use more internal equity than external equity if it is well managed. All the evidence from available literature confirms that the use of external equity is negatively related with age. The next section discussed the third hypothesis.

The use of debt by SMEs is negatively related with age, size and profitability of the firm.

Information used to test the third hypothesis came from section A and B of the research instrument. Debt ratio was determined by information gathered from Question 5 and 9. The results of this hypothesis portrays that there is a significant positive relationship between use of debt and the three variables (age, size and profitability). Therefore we rejected the null hypothesis which stated that the use of debt is negatively related to the size, age and profitability.

The results were consistent with Hall *et al.*, (2004:711) who agreed that age is positively related to long-term debt. Dhawan, (2001:267) also indicated that sources of capital depend, to some extent, on whether a business is developing or maturing. For example, developing firms tend to rely on equity because of difficulties raising debt, whereas mature businesses are able to leverage assets to raise debt.

The results were also consistent with the study done by Petersen and Rajan, (1999:407) who also found that older firms should have higher debt ratios since they should be higher quality firms. They concluded that most large firms have access to debt finance since they are considered to be less risky as compared to small firms. Section 6.5 will discuss the recommendations.

1.9 CONCLUSION

Little research has been done on the determinants of capital structure of SMEs in South Africa. This study has attempted to make a contribution to this area and has come up with interesting findings and recommendations. The literature review introduced various elements within the field of SME finance, especially the capital structure. In this chapter objectives of the study were revisited and it was indicated that all objectives were met. Furthermore, propositions were revisited and explained as accepted or rejected.

The main findings of this study showed that age, size and profitability of the firm are determinants of capital structure. A good understanding of the capital structure of SMEs is still elusive. Two final points should be emphasised with regard to the determinants of capital structure. Size, age and profitability of the firm are not the only determinants of capital structure but there are other determinants such as asset structure, risk, collateral, culture among others. Secondly the 'Pecking Order Theory' appears to dominate the South African capital structure story however, many theories offer similar predictions as to the capital structure of firms. Often the only difference between the theories lies in the strength of

predictions. It should be born in mind that the major objective is to identify the determinants of capital structure, rather that to test the relative potency of individual theories.

The issue of capital structure is an important strategic financing decision that firms have to make. It is therefore important for policy to be directed at improving the SME financing. Firms, especially SMEs, are encouraged to maintain proper records. Policy makers should place greater emphasis on the facilitation of equity capital since it provides a base for further borrowing, reduces business's sensitivity to economic cycles, and provides firms with access to syndicates of private and institutional venture capital suppliers. It is appropriate to establish financing schemes to assist SMEs in specific industries. It is hoped that the findings of this study could make an important contribution in the areas of theory and SME development as well as policy formulation in various departments connected with the promotion of the SME financial sector. Hopefully future research would and endeavour to open new areas in this important area.

1.10 RECOMMENDATIONS

The main findings of this study showed that age, size and profitability of the firm are determinants of capital structure. A good understanding of the capital structure of SMEs is still elusive. Two final points should be emphasised with regard to the determinants of capital structure. Size, age and profitability of the firm are not the only determinants of capital structure but there are other determinants such as asset structure, risk, collateral, culture among others. Secondly the 'Pecking Order Theory' appears to dominate the South African capital structure story however, many theories offer similar predictions as to the capital structure of firms. Often the only difference between the theories lies in the strength of predictions. It should be born in mind that the major objective is to identify the determinants of capital structure, rather that to test the relative potency of individual theories.

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promotion of the SME financial sector. Hopefully future research would and endeavour to open new areas in this important area.

Small business owners should be encouraged to ensure that business start-up capitalisation meets the needs of their business and is sufficient to enable start-up and business growth. SME owners should consider spending a higher proportion of their time engaged in activity related to acquiring finance at start-up and throughout the life of their business. SME owners should consider alternative sources of finance to those traditionally used at start-up and during the life of the business; that is, to consider moving away from using credit cards to fund the business and instead using, for example, bank overdrafts, factoring and leasing.

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THE STATE OF SKILLS IN SOUTH AFRICA: BETWEEN GENERAL SHORTAGE AND MISALIGNMENT – WHERE DOES THE PROBLEM LIE?

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Abstract

This paper highlighted the extent of misalignment in the skills produced by the Higher Education and Training (HET) system and those required for sustainable economic growth in South Africa. While the country mostly require technical skills to achieve sustainable socio-economic development, the HET institutions are mostly producing graduates in the Social Sciences and Humanities which are not critically required by the economy at present. The paper reviewed related literature and gathered secondary data from four public universities in South Africa to achieve the main objective of the paper; that is: review related skills development and shortages literature in order to answer the stated research question. The paper established a gradual shift in the enrollment balance from the Social Sciences and Humanities in favour of Business, Commerce and Management without a corresponding shift in the field of Science, Engineering and Technology as proposed by the National Plan for Higher Education.

Key words: skills shortage; skills misalignment; demand characteristics; supply pipeline.

Introduction

The skills debate in South Africa has been raging for a number of years with academic researchers, various interest groups with labour and education authorities expressing divergent views. For example, Jimmy Manyi, former chairman of the Commission of Employment Equity (cited in Khumalo and Mmope, 2007) dismissed the entire argument surrounding skills shortages as an “urban legend based on racism”. However, Eddie Durant (also cited in Khumalo and Mmope, 2007) promptly declared Manyi’s assertion as an “emotional and absurd outburst”. Such was the nature and intensity of the skills debate across various strata of the society. Irrespective of whatever definition and divergent positions canvassed by different interest groups, the reality on the ground today suggest that demand for certain skills necessary for sustainable socio-economic development in South Africa far outstrip supply; and that provides the theoretical framework for this paper. This position can be further located within the context of the definition of skills shortage which the New Zealand Skills Agency define as “a mismatch between supply of people with particular skills and the demand for people with those skills” (www.skillsstrategy.govt.nz). The importance of this definition will not be lost even when the word ‘shortage’ is defined separately. The BusinessDictionary.com define ‘shortage’ as a “situation where the quantity available or supplied in a market falls short of the quantity demanded or required at a given time or price”. With this as our working definition, the following discussion will present the skills imperatives in South Africa with emphasis on the demand and supply side characteristics.

Statement of the problem

Evidence from existing literature shows that skills shortage in South Africa is already reaching a critical height (Govender, 2008; South African Institute of Chartered Accountants, 2008; Kinneer and Sutherland, 2001; Harris, 2007; Department of Labour, 2006). A survey report by Jinabhai (2005) reveals paucity of competently skilled black managers and other professionals in South Africa and this trend is likely to reach a critical mass in the 21st century. This report is consistent with projections by the National Skills Authority (as cited in Jinabhai, 2005) which shows that there are only 3-million skilled people in South Africa. According to the Human Sciences Research Council (HSRC) report by Pretorius (1999), 76% of the 273 organisations surveyed did not have adequate skilled human resources. Similarly, 54% of 113 organisations that employs engineers have problems in recruiting professionals – especially mechanical, electrical, civil and industrial engineers. Furthermore, 25% of 65 of the organisations surveyed experienced shortages in engineering technicians.

The report also revealed shortages in IT professionals, accountants, economists, financial analysts, investment specialists, medical practitioners, actuarial practitioners, managers and artisans. According to Cisco Systems (2006) South Africa ranked among nine emerging economies surveyed in the Middle Eastern region and Pakistan. The report of Cisco Systems (2006) survey indicate that unless networking skill shortages are addressed urgently, there will be a shortage of almost 265,000 skilled people required to help drive economic growth in these economies. The study further revealed that by 2009, demand for the skilled people necessary to develop, build and manage IT systems required to support continued economic growth in these regions will outstrip supply. For instance, demand will outstrip supply by 24% (i.e. 35,700) in Israel, 24% (i.e. 113,900) in South Africa and 35% (i.e. 114,800) in other countries surveyed in the Middle East region and Pakistan. South Africa has the highest number of skills shortages in comparison to survey from other countries in the report.

The core of the matter however is the report by Mitropolitski (2009) suggesting that there are over 500,000 vacant positions in the public and private sector organisations in South Africa that remained unfilled because employers could not find appropriately qualified South Africans to fill them. At the same time, Hill (2007) states that there are 200,000 unemployed graduates in South Africa with 40,000 of them having university degrees. Alluding to this reality and also supporting the Development Policy Research Unit (DPRU) (DPRU, 2007) report, Mark Peters, director of executive education at Wits Business School (cited in Peacock, 2009:11) confirms that “additional problem to skills shortage was the mismatch of training and job openings. The skills shortage is not being addressed properly because we still have so few people employed”. Reiterating the problem of skills mismatch further, Peters asserts that the “Joint Initiative on Priority Skills Acquisition (JIPSA) is not effectively marrying industry’s needs and the training provided. Schools and guidance officers have a big role to play in directing students to opportunities. We see an increase in the number of project-based activities in corporate South Africa, but we’re not developing people to cope with that environment”.

A report by Civil Engineering Bulletin cited in Didiza (2007) states that as many as 90% of South Africa’s consulting engineering firms are trying to employ skilled engineers, technologists and technicians but finding it hard to identify prospective candidates. Similarly, a survey by the South African Institute of Architects, in conjunction with the Joint Initiative on Priority Skills Acquisition (JIPSA), shows that 80% of the country's architectural practices have shortages of 40% (Khumalo and Mmope, 2007). Research Development Review (RDR) (RDR, 2008: 21) further report that although there has been a steady increase in the

total graduate output, the sciences, engineering and technology share of these graduates in percentage remained at an average of 27.5% per annum. The engineering profession is worse hit by poor percentage output of graduates. The graduation rate for construction and engineering students at undergraduate level in universities and universities of technology were put at 14% in 2004 (Didiza, 2007). Skills shortages are already manifesting in poor service delivery. For example, Kgosana (2008) asserts that the Department of Home Affairs is sitting with hundreds of incompetent senior managers who are unable to perform their duties and whose skills do not match their job descriptions. This is as a result of serious lack of management capacity and issues with management competence. Concurring with Kgosana, Stokes (2010) submits that “if you want a taste for poor skills you need only to look at the country’s public sector. Poor performances at South African Airways, the Land Bank, Eskom and the South African Broadcasting Corporation which can be attributed to management, where individuals are often promoted to levels beyond their competence”.

The tertiary institutions that are traditionally responsible for producing highly skilled job candidates are themselves crippled by skills shortages. Govender (2008:16) states that the University of Witwatersrand had difficulty recruiting staff in disciplines that required highly skilled professionals and academics such as accounting, actuarial science, and the core sciences. Govender (2008:16) further states that the University of the Free State could not find suitable employees for senior posts after advertising the positions for two years.

Having considered the evidence from various literature reviewed above, the present study concludes that the skills problem in South Africa is not lack of skills generally, rather, it is lack of skills demanded to drive sustainable socio-economic development that is in short supply thus resulting in ‘structural’ shortages.

It is against the background of the problems discussed above that the present study seeks to address the following research question:

- To what extent is the present human capital produced by the Higher Education and Training system addressing shortages in the skills demanded for socio-economic development in South Africa?

Objective of the study

The primary objective of the study is to:

- Review related skills development and shortages literature in order to examine the extent of misalignment in the workplace skills demand and those produced by tertiary institutions in South Africa;

Preliminary literature review

South Africa's participation in the global economy has increased tremendously since the demise of apartheid in 1994 with South Africa businesses competing in the global market place. But for these businesses to favourably compete and indeed gain competitive advantage there must be sufficient supply of the necessary skills to drive this competition. However, empirical studies have shown that South Africa's labour market suffers deeply from a dearth of skilled personnel and a continuous brain drain (Kinnear and Sutherland, 2001). Global access and competition are increasing, but there are no skilled workers to fill vacant positions (Wagner, 2001); while the few available talent migrate to outside organisations. Acknowledging the state of skills shortages in the economy, the Department of Labour (2006) contend that the importation of skills by Sasol Company indicated that it was not only job creation that was a fundamental problem in South Africa, but also a shortage of skills. It is not only Sasol Company that is importing skills from elsewhere. The Department of Health imported 1,000 medical doctors from Tunisia (Simao, 2007) to compliment shortages in the various public hospitals while the Department of Home Affairs had recently approved 4,000 work permits to enable the Department of Basic Education import mathematics and science teachers mainly from Zimbabwe and India to fill vacant positions in the secondary schools (Hindle, 2008). Eskom utility is currently planning a R340-billion infrastructure expansion with labour requirement of 1,000 skilled employees annually over the next five years (2007-2011). However, Kleynhams (2007) argues that shortage of skilled personnel could cripple the expansion project since there won't be sufficient qualified South Africans to build and operate the power stations. Retail business is not immune from the skills scourge. Shoprite was restricted from opening 14 new pharmacies because it could not recruit enough pharmacists and cannot import pharmacists because they are required to do community service first (Shevel, 2008:16). Netcare, the country's largest private hospital group identified the biggest shortage areas confronting the organisation as nurse, pharmacists and paramedics with the group having nursing vacancy of 24% (Shevel, 2008:16). It is in the light of the general skills shortages in the country that the Department of Trade (2006) declares that the dearth of skills in the economy requires that government should do whatever it could to address the problem urgently.

The skills problem in the country has been variously attributed to the legacy of apartheid which created 'Bantu' education for the black population thus resulting in a dearth of

employable people (Wagner, 2001). With South Africa businesses now competing in the global market place, the requisite skills began to change, reflecting the new economy and its appetite for knowledge workers. Erasmus and Steyn (2002:14) state that “the skills profile of our labour force clearly is poor and uncompetitive in the global economy. There are too few professional and skilled people while a large section of our workforce lacks basic skills, which restricts their employability to only the most menial tasks”. This again, Erasmus and Steyn largely attributed to the history of segregation in the provision of formal education – “Separate departments of education, separate schools for the different population groups and differentiated expenditure remained central to the South African education system until 1990”. The resultant reality today is that demand for certain skills in South Africa exceed supply thus suggesting acute shortage of core skills.

In order to address the skills problem in South Africa, the government initiated a broad based Human Resources Development Strategy (HRDS) for a period of five years (2005 – 2010). Similarly, The Joint Initiative on Priority Skills Acquisition (JIPSA) was established (in 2006) as a component of the Accelerated and Shared Growth Initiative for South Africa (ASGISA) where government identified six issues which obstruct economic growth. Skills shortages was a prominent impediment identified by ASGISA thus JIPSA was initiated to address this deficiency. Some of the strategies adopted to deal with skills shortages include special training programmes, persuading South African professionals in the Diaspora to return home, making use of retired (“but not tired”) skilled professionals and importing skilled immigrants where necessary. The JIPSA report for April to December, 2006 identifies professional skills in engineering, science, finance and management, as well as technical and artisan skills as scarce (www.info.gov.za). The report further states that while the economy currently produces about 5000 artisans annually, research suggests that at least 12 500 artisans should be produced annually over the next four years (2007 – 2011) to meet rising demand. Skills shortages in the construction and engineering industries in particular, unless addressed immediately, risk slowing down South Africa’s R400-billion infrastructure programme for the period 2007 to 2009, the report concludes.

Paradox of graduate unemployment

It is paradoxical to note that while so many positions remained unfilled in both the public and private sector organisations due to paucity of appropriately qualified South Africans, Statistics South Africa (2007) reports a 24.5% unemployment rate. Laing (2008: 3) notes that “the concentration of unemployment among the youths means that the unemployed have had rising levels of education. Of particular concern has been the rapid increase in unemployment levels for people with tertiary qualifications, especially diplomas’. Other

studies (e.g., Oosthuizen, 2006; Oosthuizen and Borat, 2005) have presented evidence to support the existence of a pool of unemployed graduates, many of them 'Africans'. Borat attributes graduate unemployment to the type of qualifications they had as well as their fields of study. Manthase (also cited in Hill, 2007) concurs by stating that many black students pursued degrees in the arts, while majority of white students pursues degrees in high-demand fields such as engineering. This is also consistent with the assertions by Mosidi Nhlapo as reported in Hawkey (2010:7) that many African students chose to specialise in arts and humanities, fields that tended to have lower managerial and professional prospects. The evidence presented so far can only suggest one reality - misalignment - in the current education system and the labour market demand. While labour market suggest high demand for technical graduates such as engineering and technology, health sciences, management, accounting and others, the enrolment reality in higher institutions reveal that most students (particularly blacks) registers for courses in the social sciences and humanities which are less acute. These fields do not prepare them for professions thereby accounting for their inability to get jobs unlike their counterparts in critical fields of shortage.

Research by the Development Policy Research Unit (DPRU) (DPRU, 2007) shows that universities seem to focus on how many students they can enroll without taking into consideration the relevance of their degrees to the skills demanded by the economy. Similarly, Barnes (2009: 39) states that "the problem commonly referred to as a 'skills shortage' in South Africa is itself a nebulous concept, which encapsulates several specific issues – shortages in some cases (e.g. engineering and some technical skills), but skills surpluses in other areas (such as the social sciences)". Stated differently, there is significant 'mismatch' between the skills sets being generated in local tertiary education institutions and the skills required for business. This has necessitated the approval of a strict enrolment and performance targets by the department of education for higher education institutions to produce more job-ready graduates. The plan requires most institutions to limit their intake in the humanities – which include arts and social sciences – in favour of fields such as business, engineering and technology (Govender, 2007: 8). A sum of R4-billion was injected into higher education institutions to improve infrastructure and increase the number of graduates with a capping in humanities nationally to around 196,000 (Govender, 2007: 8). The total number of social science graduates shot up from 253,431 in 1994 to 548,383 in 2004 (Govender, 2007). Current attempts by the department of higher education to regulate student intake in favour of certain fields of study is therefore a general agreement that the demand for certain skills required to develop the domestic economy is far in excess of current supply. The resultant effect of the "skills inappropriateness and inadequacy of the South African workforce has been one of the factors hindering its economic success in the

global economy (Barnes, 2009: 39). “This then requires an up to date linkage of education and training to meet the market demands and avoid mis-skilling (imparting skills that are in excess in society when there is a serious lack of skills that are in demand) and consequently unemployment”. Barnes therefore concludes that the upgrading of the supply characteristics of the new labour market entrants is therefore pivotal in this context.

Dias (2005) however express contrary view to existing literature on skills misalignment and shortages in South Africa. Drawing from statistical figures of unemployed graduates, Dias (2005) concludes that the problem is not necessarily with the qualifications of graduates being inappropriate, but the labour market’s failure to absorb the number of new entrants with tertiary qualifications especially if this is viewed in light of the growth in employment levels by sector and skills categories. Hence, Dias cautions that improving the education qualifications of the unemployed is not a guarantee for employment since the labour market seems saturated. This is consistent with Standing *et al.* (2000) who argue that “one cannot presume that if all those without secondary schooling were provided with it and if all those without a skills required by the economy were provided with one, that unemployment would fall dramatically”. Whichever direction we look at the problem however, it will be difficult to justify the arguments of (Dias, 2005; Standing *et al.*, 2000) in the face of subsisting empirical evidence where certain vacant positions (engineering, medicine, financial management for example) could not be filled due to non-availability of appropriately qualified job candidates whereas we maintain a pool of unemployed graduates in fields such as the social sciences and humanities.

In a country that annually spends over 20% (e.g., R140.4-billion in 2009/10 budget) of the total government expenditure on education (Verwey *et al.*, 2009) and has 12,3 million learners (26% of the total population) and more than a million students (2% of the total population) in tertiary institutions, it is difficult to justify such a high rate of skills shortage and low rate of job creation. One possible reason that could be responsible for this reality is the education system’s failure to effectively respond to the dynamics of skills demand and supply in the country. Both Thompson (1981) and Forojalla (1992) identified mis-skilling as one of the factors contributing to the growing level of educated unemployed. This, according to the human capital development theory, inevitably results in poor education investments as some of the rewards are forfeited. Another factor that could impair the ability of the higher education system to produce sufficient skilled graduates to meet South Africa’s needs has been attributed to the high rate of student dropout. According to the Department of Education (DoE) (DoE, 2005), of the 120,000 undergraduates who entered higher education for the first time in the year 2000, half of the cohort dropped out before completing their

degrees and only 22% of the total cohort had graduated at the end of their third or fourth year of study. It is equally important to note that, while considering the number of graduates at South African institutions, a sizeable number of these graduates are foreign students who return to their countries after graduation and so do not add up to skills that would be available in the South Africa's labour market. The production of students with skills that are less desired by the economy therefore creates a workforce with inappropriate skills and increases the already high rate of graduate unemployment with the attendant socio-economic and psychological consequences. This situation needs to be urgently redressed as the continued inappropriate investments in human capital could seriously constrain the country's prospects for sustainable economic growth.

Problems inhibiting skills development by the HET band

A study by the Human Sciences Research Council (HSRC) reported by Cosser (2009:1) state that only 3% of matriculation learners are interested in teaching as a profession (Table 1.1). This is consistent with a survey outcome of 12,204 Grade 12 learners in 288 schools across the nine provinces by the South Africa Research Programme on Human Resources in 2001. The survey showed that 4,415 learners had preference to study education at higher institution but enrolment reality in 2002 at institutions of higher learning indicated that only 1,948 learners actually registered to study education (Cosser, 2010). This poses serious concerns around the teaching profession as it means the country will run out of teachers in the next ten years. The report is supported by Metcalfe cited in Govender (2008:1) who assert that "we are not producing enough teachers although there is capacity in the system to do so". Hindle also cited in Govender (2008:1) did not however concur with the positions presented by these authors. Hindle asserts that "there is enormous demand for the government's bursary scheme, suggesting that more teachers are being currently trained thus resulting in increase in the number of teachers in the near future". But an integrated report prepared by a consortium of experts for the Education Labour Relation Council (2005: 17) notes that "there has been a decline in students taking the Initial Professional Education of Teachers (IPET) qualifications, namely undergraduate Bachelor of Education (B.Ed) and the Post Graduate Certificate in Education (PDCE)". The report further notes that "self-reported data from the Deans' Forum in 2004 indicated that education institutions are producing at best approximately 9,000 graduates of whom at least about 3,000 may already be practicing educators". Perhaps, the problem with Hindle's position may then lie with the graduation rate of these bursary beneficiaries; many of whom may completely drop out of school while some may change from teaching to other professional courses.

The shift in the number of graduands from the arts and humanities to management and

commerce as contemplated by the DOE could be linked to career aspirations of Grade 12 learners. Survey outcome of 12,204 Grade 12 learners in 288 schools across the nine provinces of South Africa by the Research Programme on Human Resources Development (HRD) at the Human Science Research Council (HSRC) in 2001 indicated that vast majority of learners planned to study Business and Commerce at a HET institution (Cosser, 2010: 47). For example, 32%, 23%, 15%, 11% and 2% of learners planned to study Business and Commerce, Engineering and other applied sciences, Health Sciences, Natural and Mathematical Sciences and Education respectively (Cosser, 2010: 47) while fewer than 10% of learners planned to pursue studies in other fields. Enrolment reality in institutions of higher learning however does not support career ambitions of learners as demonstrated above. In 2002 for example, the profile of headcount enrolments by study field revealed a wide disparity between learner preferences and student enrolments as shown in Table 1.1.

Table 1.1: preference (2001), and enrolment (2002) by field of study

Field of study	DOE targets %	Preference 2001	Enrolment 2002	% of preference
Science, engineering & technology	37.0	149,679	22,479	15
Business & commerce	33.0	100,034	19,673	20
Education		4,415	1,948	44
Social science and humanities	30.0	55,833	17,377	31
Total	100%	309,061	61,477	20

Source: Adapted from Cosser (2010)

As illustrated in Table 1.1, there are significantly wide margins between the preference rates and actual enrolment in all fields of study. Two reasons can be attributed to this disparity. First, low pass (endorsement) rate in 2001 matric examination results. This suggests that out of the 309,061 Grade 12 learners who would want to enter the HET institutions in 2002, only 61,477 (20%) passed with endorsement and actually enrolled at a HET institution. Secondly, the vast majority of matriculants who would want to pursue degrees in SET and Business and Commerce, for example, could not as a result of failure in subjects such as mathematics and science which are requirements for enrolment in these fields of study.

It is not only professional teachers that are being under-produced; there is gross under-production of construction and engineering graduates. According to Didiza (2007), the quality of learners entering construction and engineering programmes is also recognised as a challenge to skills development. Academic institutions point to the critical skills and attitudes of matriculants, irrespective of their matriculation passes, as often being unsuitable for the rigour required in engineering studies. This mismatch, Didiza (2007) notes, results in high drop-out rates, where students change their studies mid-stream, which subsequently translates into low turnout rates of engineering graduates.

Apart from the attitudinal factor on the side of learners, Didiza notes that the capability and extent of preparedness of academic staff to instruct a new generation of learners is also a factor impacting on the production rate of engineers. Equally of concern is the quality and state of repair of teaching infrastructure at some of the institutions which influences the performance of learners with limited prior exposure to technological infrastructure (Didiza, 2007). There is also a systemic dimension to the problem of acute shortage of practicing engineers. Didiza (2007) observes that some engineering programmes accredited by the Higher Education Quality Council (HEQC) are not accredited by Engineering Council of South Africa (ECSA) resulting in some universities and universities of technology offering non-ECSA accredited programmes to learners. The implication of this scenario is that graduates of ECSA non-accredited programmes cannot practice or register as professionals in the field resulting in wastage for the learners and the higher education system as a whole. Table 1.2 shows the number of engineering graduates from universities and universities of technology between 1996 to 2005.

Table 1.2: Number of graduates per field of study

Field of study	Number of graduates									
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Mechanical engineering	872	853	766	631	577	706	695	718	765	856
Marine engineering	13	7	26	17	13	25	36	49	51	50
Civil engineering	817	747	767	787	731	811	901	886	1043	1036
Chemical engineering	554	463	523	351	520	596	575	615	737	738
Other	244	210	130	392	353	272	421	364	397	413

Source: DoE 2007

Table 1.2 shows that the growth rates for all fields (except for marine engineering, growing fast from a low base) are unacceptable, and for many disciplines, they are lower than the growth rate of the economy over the same period. In summary, Didiza (2007) submits that supply-side analysis suggests that all growth indicators in the production of engineering graduates, in relation to the economy, are declining. Grade 12 teaching inputs are poor and mathematics pass rates are still unacceptable. Numbers of engineering higher education and training graduates are far below what is needed in the economy and the gap between current growth, required growth and what is actually being delivered is widening (Didiza, 2007).

Another impediment to skills supply pipeline in the HET institutions is the difficulty of attracting and retaining highly qualified but poorly remunerated academic staff. This makes it increasingly difficult to effect a radical improvement in graduation rates. Didiza (2007) puts the average graduation rate at universities and universities of technology at 14% for undergraduate engineering programmes in 2004. It is not only the engineering programme that is affected by shortage of qualified academic staff. Temkin (2008) citing Ignatius Sehoole, the Chief Executive Officer of the South African Institute of Chartered Accountants (SAICA) reports that "SAICA conducted a lengthy study of the accounting programme at the University of Witwatersrand in 2008 and concluded after a monitoring visit to the University in August, 2008 that the programmes did not comply with its standards and that steps would be taken to withdraw its accreditation". SAICA who regulates the accounting profession and the quality of South African accounting is often cited as one of the main reasons foreigners invest in South Africa. Some of the reasons attributed to the withdrawal threat by SAICA, according to Temkin (2008) include: shortage of academic staff, particularly in the core disciplines of taxation, financial management and accounting. Other reasons included loss of a number of senior staff members over the last few years; problems attracting and retaining staff; a large number of staff appear to be demoralised; and the pass rates for black students are considerably lower than for white students, with the number decreasing significantly from the first to the fourth year. There are currently 27,047 chartered accountants in SA and the country is in a dire need of accountants amidst skills crisis; the profession that is arguably the most fundamental to the economic success of South Africa (Temkin, 2008).

The FET Colleges band as a skills supply pipeline

A second and equally important component of the South Africa's skills supply base is determined by the Further Education and Training (FET) colleges. FET colleges are regarded as another avenue for technical skills development at the intermediate level and taking a central role in the delivery of priority skills needed in South Africa (Pandor, 2007). However, like the HET band, the FET colleges have been bedeviled with various constraints. One of the problems confronting the FET colleges is their inability to align course offerings with the demand of industry. Unlike universities and universities of technology, where there are advisory boards with industry representation, there is no communication between the FET colleges and industry. As a result, skills produced by these institutions are not aligned with industry needs. Mukora (2007) observes that enrolment figures in the FET colleges suggest that enough artisans-type skills are being produced. Nonetheless, employers continue to report a shortage of qualified artisans. The explanation is that employers perceive FET outputs as not providing the kind of skills that they require in industry. The FET college problem, Mukora (2007) notes, arises because many learners who are currently undertaking college studies within the priority areas do so with insufficient or no access to workplace experience. With only limited opportunity or none at all for access to workplace experience, these learners learn theory as theory, mainly for examination purposes and access to further studies (Young and Gamble, 2006).

The FET Colleges which are established primarily to produce intermediate skills through programmes of study that are intended to respond directly to the priority skills demands of the economy are, like other institutions, faced with capacity problems. According to Kraak (2008), the public FET colleges as an important partner in the new skills development initiatives; especially in the area of curriculum development and training of learners are equally under-performing. Badroodien and Kraak (2006) observe that the curriculum development of learnerships is often out-sourced to private curriculum consultants and companies. Perhaps, the FET colleges are having capacity problems because the process of delivering learnerships in the colleges is generally regarded as time-consuming and challenging. This practice of out-sourcing curriculum development by the colleges could be counter-productive. According to Kraak (2008), the new curriculum activity should be integrated into the everyday workings of the college. Knowledge and experience developed in this area of academic exercise should contribute immensely to the in-house capacity building in the colleges instead of losing them out to outside consultants. In addition, report from the DoE (2004) indicates that 8% of all teaching staff at FET Colleges had less than a

diploma (Brown, 2007). Of this percentage, there are 27% engineering staff with trade certificates (i.e. engineering & utility studies), 55% with engineering trade certificate while another 27% had utility trade certificate (Brown, 2007). This indication has caused industry to raise concerns about the quality and relevance of both the practical and theoretical training that learners receive at FET colleges, citing both the qualifications and workplace experience of the teaching staff as a concern (Didiza, 2007).

According to Grawitzky cited in Brown (2007), a shortage of qualified technical instructors has emerged as an impediment to increasing training capacity; the same is also true for workplace assessors and mentors. It is increasingly becoming difficult to find trainers while assessors are poorly trained with training becoming too theoretical (Brown, 2007; Peacock, 2009 citing CDE). This, Brown (2007) notes, has resulted in 50% under-utilisation of state owned enterprises' (e.g. Transnet, Eskom, and Metrorail) training facilities. In order for the FET Colleges to fulfill its central vision of becoming a seamless interface between basic schooling and workplace learning, and a bridge to higher learning, Hensley, cited in Brown (2007) recommends that trainers in the industry and colleges require expertise in teaching and learning methodologies in addition to their professional qualifications.

Research design and methodology

The study adopts exploratory research strategy which Gerber-Nel *et al.* (2005:30) described as research that is used to gather preliminary information to help clarify the research problem. Exploratory research collects information in an unstructured, informal manner. The purpose of this type of research is to progressively narrow the scope of the research topic and, consequently paraphrase the problem or opportunity clearly. Exploratory research is conducted by investigating previous studies on the subjects, talking with knowledgeable individuals, and informally investigating the situation through secondary data (Gerber-Nel *et al.*, 2005:30). Letters requesting for statistics of students who graduated with various bachelor degrees from 2003 – 2008 were delivered to Registrars of selected (11) universities and universities of technology (which represents the sample size of this study) by the researchers. Out of the sample size, only (4) responded giving a return rate of 36%. The return rate will be improved upon before the completion of the research, however, the present return rate of 36% can be considered adequate in line with a typical return rate of 30% recommended by Shaughnessy and Zechmeister (1997: 144). South Africa presently has a total of 23 (population of the study) public universities and universities of technology. Data collected from respondents was broadly analysed according to faculties from 2005-2008 (as presented in Tables 1.3 to 1.6). Data supplied by some of the respondents do not account for 2003 and 2004 graduation figures.

Preliminary findings

Policy intervention by the Higher Education and Training Department to regulate admission patterns in institutions of higher learning to reflect the current reality in skills demand is already manifesting some positive results. Pieterse (2009: 226) reports progress in shifting the balance of enrolment in HET institutions across the humanities, social sciences and education (HSSE), business, commerce and management (BCM) sciences, and science, engineering and technology (SET), as proposed by the National Plan for Higher Education (DoE, 2001). The National Plan set a target to shift the balance of enrolments between (i) humanities, (ii) business and commerce, and (iii) science, engineering and technology from 49%: 26%: 25% in 2001 to 40%: 30%: 30% by the end of the decade (DoE, 2001: 27). However, Kraak (2009: 5) contends that the Department of Education has never been able to test the usefulness of these policy objectives through drawing up detailed correspondences between specific academic programmes at particular higher education institutions and actual sectoral needs located in specific regions of the country. This 'policy gap', Kraak (2009: 5) further contends, has had a negative effect, handicapping the ability of education and training institutions to offer courses customised to particular development trajectories or technology platform needs.

Nevertheless the proposal by the National Plan for Higher Education has seen business, commerce and management graduates more evenly split between the various levels of qualifications. For example, there were 1,864 marketing, 1,416 personnel management, 1,894 other management, 12,267 accounting, 799 administration and 6,998 management graduates in 2005, with a significant number of these obtaining postgraduate qualifications (Pieterse, 2009: 226). This trend also reflects in the graduation growth pattern between 2000 and 2005 with concentration gradually shifting from the social sciences and humanities to management and commerce. The statistics of bachelor graduates from the University of Fort Hare from 2005 to 2008 (Table 1.3) supports this trend. This is, however still far from the projection of at least 270, 000 of the country's estimated 820, 000 students population at tertiary institutions to register for business and management degrees by 2010 (Govender, 2007: 8).

Table 1.3: Number of academic and professional undergraduate bachelor degree graduates at the University of Fort Hare

Faculty	Year and number of graduates				Total
	2005	2006	2007	2008	
Education	319	354	285	77	1035
Law	-	85	118	131	334
Management & Commerce	229	204	248	313	994
Science & Agriculture	205	177	202	185	769
Social Sciences & Humanities	469	351	318	384	1522

Source: Planning Unit, University of Fort Hare (2009)

Management and Commerce degree offerings at the University of Fort Hare include Industrial Psychology, Accounting, Business Management, Public Administration, Development Studies, Information System and Economics.

Table 1.4: Number of bachelor degree graduates at the Rhodes University

Faculty	Year and number of graduates				Total
	2005	2006	2007	2008	
Education	62	56	62	66	246
Law	57	56	61	54	228
Commerce	313	313	334	310	1,270
Science	254	242	250	243	989
Humanities	536	577	639	552	2,304
Pharmacy	44	69	70	74	257

Source: Data Management Unit, Rhodes University (2010)

The number of graduates includes honours degree while the degrees in the Faculty of Commerce include those in Accountancy, Business Science and Economics. Those in the Faculty of Science include Software Development and Information System while those in the Faculty of Humanities comprise Journalism, Fine Arts, Music and Social Science.

Table 1.5: Number of bachelor degree graduates at the Nelson Mandela Metropolitan University

Faculty	Year and number of graduates				Total
	2005	2006	2007	2008	
Education	655	528	337	-	1,520
Law	163	102	136	-	401
Business & Economics	596	735	745	-	2,076
Science	230	230	225	-	685
Health Sciences	269	311	212	-	792
Engineering, Built Environ. & IT	200	171	164	-	535
Arts	492	330	322	-	1,144

Source: HEMIS, NMMU (2010)

Degree offering at the Faculty of Health Sciences at the NMMU includes those in Pharmacy, Human Movement Sciences, Social Work, Biomedical Technology and Psychology.

Table 1.6: Number of bachelor degree graduates at the Stellenbosch University

Faculty	Year and number of graduates				Total
	2005	2006	2007	2008	
Education	407	250	263	251	1,171
Law	132	114	145	144	535
Economic & Management Sciences	1,318	1,444	1,374	1,354	5,490
Science	422	396	535	577	1,930
Engineering	227	267	265	251	1,010
Health Sciences	176	207	239	153	775
Military Sciences	54	77	68	77	276
Agricultural Sciences	131	244	275	257	907
Arts & Social Sciences	836	911	965	925	3,637

Source: Institutional Information Unit, Stellenbosch University (2010)

Graduates in the Faculty of Theology are counted with those from the Faculty of Arts and Social Sciences for the purpose of this research.

Conclusions and recommendations

This paper highlighted apparent misalignment in the skills demand-supply side pipelines. Policy intervention by the education authorities has, to a limited extent succeeded in shifting

enrolment balance in institutions of higher education from the Social Sciences and Humanities in favour of Business and Commerce. However, the shift towards Science, Engineering and Technology has not achieved the desired result. This shortcoming could be attributed to continuous poor performance of matriculants in mathematics and science. Many more learners are beginning to nurse the ambition of obtaining degrees in the fields of Science, Engineering and Technology, however, there has not been remarkable correlation between this ambition and actual enrolment and ultimate graduation in these fields as demonstrated in this paper. It is therefore imperative for the education authorities to put in place effective intervention mechanisms in order to significantly improve the quality of teaching in these subject areas in order to improve the pass rate. Involvement and collaboration of the industry in the design and implementation of study programmes (especially those that are technically oriented) is essential in order to provide undergraduates with a practical knowledge of the workplace requirements.

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THE IMPACT OF STRATEGIC LEADERSHIP ON OPERATIONAL STRATEGY AND ORGANISATIONAL PERFORMANCE IN BUSINESS ORGANISATIONS IN SOUTH AFRICA

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Abstract

Since the mid-1980's a growing body of leadership research has focused on strategic leadership, in contrast to managerial and visionary leadership. The research focused on how leadership makes decisions in the short term that guarantees the long-term viability of the organisation. The best performing leaders are consciously strategic in their leadership planning. These top leaders also have the ability to align human resources in an effective way directly to the business strategy. This paper identifies the most important direct and indirect pathways through which strategic leadership influences the operational strategy and performance of business organisations in South Africa and identifies theoretical and substantively meaningful endogenous organisational capabilities that mediated this relationship and exogenous organisational factors that moderated this relationship.

1. Introduction

Wheeler, McFarland & Kleiner (2008:1) argue that: "A rapidly changing world has created a society craving for speed and action. Future leaders, therefore, face incredible pressures to deliver immediate results, to do more with less and to manage an ever-increasing personal workload. The pace and urgency of daily demands can make it difficult to be more than the

step ahead into the future. But in a world of changing conditions and priorities, leaders and individual contributors alike must be able to look beyond the 'now' and take a more strategic leadership approach to their work and responsibilities". Without effective strategic leadership, the probability that an organisation can achieve superior, or even satisfactory, performance when confronting the challenges of the global economy will be greatly reduced (Hitt & Ireland, 1999).

What then, is strategic leadership? Wheeler, McFarland & Kleiner (2008:1) have explained it as follows: "It is nothing more than the ability to anticipate, prepare and get positioned for the future. It is also the ability to mobilise and focus resources and energy on the factors that make a difference and will position one for success in the future. It is the courage to think deeply about what one wants to do. Applied strategic leadership is about creativity, intuition and planning to help one reach one's destiny".

Great leaders are judged as much by what they leave behind as by what they achieve during their tenure. A vibrant, vital organisation that is competitive and driven to excel is, of course, an important legacy for a leader (Boal & Hooijberg, 2001). This means having in place a high-performing leadership team, a thinking organisation and managers and employees at all levels passionately committed to getting things done. High performance is defined as the enduring or out-performance of peers, across businesses and economic cycles, often across generations of leadership (Breene & Nunes, 2006:11). In this context, the proposed study will identify the direct and indirect pathways to strategic leadership practices from the literature, and survey the top 200 listed South African organisations of 2008, as published in the Financial Mail (2009), in order to ascertain how these antecedents influence the success of these organisations.

2. Problem investigated

Leaders should be measured by the results they achieve in their organisations or on the sustainable strength of the institution they leave behind. The problem is that many executives report pressures to focus on short-term metrics at the expense of the future. When pushed, some might even respond that they cannot be held accountable for the future when they are no longer there (Malnight & Keys, 2007).

An additional problem that leaders face is to keep the pace of change within their organisations as fast as, or faster than, the pace of change is happening around them. It takes a new level of strategic leadership which also focuses on building the strength of the institution (Ellis, 2005).

It is however not just a problem for individual executives. Many leadership teams report spending too much time deciding what they can or cannot do in the face of intense short-term pressures. They do not take the time or effort to make sense of what they have to do to build a strong institution that will continue to succeed in the next two, three, five or ten years. They plan rigorously, but within incremental, outdated processes. The operational demands to deliver short-term results far outweigh the strategic demands to build their organisations for the future (Malnight & Keys, 2007).

Leaders are frequently pressured to achieve operational and short-term issues. They for instance get rewarded for these short-term results and their job security might even depend on it. Strategic leaders need to, however, also look at the future and identify future changes and challenges. The problem is that they normally do not have the time to consider these issues. Strategic leadership requires for leaders to slow down, and focus their mind with discipline and skill on the future (Ellis, 2005).

Leadership has never been an easy “proposition”. Throughout history, observers have wondered if there were enough capable leaders to manage the challenges facing all types of organisations. Today, organisations face something of a “perfect storm” of problems that have profound implications for current and future leaders (Fulmer, 2007:7).

According to Fulmer (2007:9), the following are strategic leadership problems of current and future leaders:

- Competition is coming from unexpected quarters, and because the rules of the business game are changing with this competition, current leaders represent what the business needed in the past and not the present or the future.
- The internal talent pipeline often lacks sufficient numbers of dynamic and competent leaders to replace leaders that are or soon will be leaving.
- The organisation’s expansion goals outstrip the amount of internal talent needed to support them.
- Globalisation and increasing technological demands make the leader’s job more difficult than ever.
- Problems with strategic direction, organisational alignment and employee commitment continue to exist and are exacerbated in the current competitive environment.

- Human resources and those responsible for leadership development feel increased pressure to demonstrate value, particularly in terms of return on investment for leader development, and other education and training initiatives.
- Leadership development initiatives are not integrated with business needs, and consequently, are of questionable value to internal customers.

3. Research objectives and hypotheses

The purpose of this paper is to identify a number of possible direct and indirect ways of how strategic leadership may influence and impact the operational strategy and organisational performance of business organisations in South Africa.

The study has identified some of these pathways and has also identified theoretical and substantively meaningful endogenous organisational capabilities that mediate this relationship and exogenous organisational factors that may moderate this relationship.

The literature review aims to support the proposed empirical study by:

- Arguing that strategic leadership is positively associated with operational strategy;
- Extending the research done internationally on strategic leadership by empirically assessing the concepts in a South African context;
- Confirming that effective strategic leadership practices could help South African business organisations to enhance their performance while competing in turbulent and unpredictable environments.

The role of strategic choice and management discretion on the performance of organisations has long been the focus of leadership research. The resource-capability view suggests that organisations need to build a unique set of resources and capabilities, but that this should be done within the framework of the dynamics of the industry (or industries) in which an organisation competes. In this context, an organisation is viewed as a “bundle of market activities and a bundle of resources” (Eisenhardt *et al.*, 2000).

Strategic leadership can, therefore, be viewed as a competency that is the capability of creating capabilities within an organisation by the acquisition, recombination and renewal of these activities and resources (Eisenhardt *et al.*, 2000; Miller, Eisenstat, & Foote, 2002). The following sub-research hypotheses have been tested in this study:

Hypothesis 1:

Operational strategy is directly and positively associated with Strategic leadership.

Hypothesis 2:

Organisational performance is directly and positively associated with Strategic leadership.

4. Literature review

Few leaders allow themselves to think about strategy and the future. Leaders should give direction to every part of the organisation – from the corporate office to the loading dock. Strategic leadership is therefore the ability of the leaders to create and re-create reasons for the organisation's continued existence. The leader must have the ability to keep one eye on how the organisation is currently adding value and the other eye on changes, both inside and outside the organisation, that either threaten its position or present some new opportunity for adding value (Montgomery (2008).

4.1 Explaining strategic leadership

Rowe (2001:82) defined strategic leadership as: "The ability to influence others to voluntarily make day-to-day decisions that enhance the long-term viability of the organisation, while at the same time maintaining its short-term financial stability". Amos (2007:3) has a similar view to Rowe and defines strategic leadership as: "The ability to understand the entire organisation and the environments within which they operate and using this understanding to create strategic change through other people so as to position the organisation in the environment for both short-term stability and long-term viability".

4.2 Operational strategy and the impact of strategic leadership on the strategy of an organisation

The primary task of high performance leaders is to provide strategic direction to the organisation, various departments and divisions within the organisation, and to the people who ultimately implement strategic leadership. People at 'the top' of the organisation, normally in executive leadership positions, have tended to have control over the strategic processes. They have tended to make decisions, create policies, and inform people who report to them about the tasks and objectives that must be fulfilled. In essence, they have exercised 'power over others' as the main means of getting things done. In the process they have often become alienated from the realities of operational demands and challenges.

To compete, survive and perform in a highly competitive environment, an organisation's strategy must be aligned with that of its environment and at the same time the organisation must have the capabilities that fit its strategy. This is to say that 'fit' (see Beer, Voelpel, Leibold & Tekie, 2005) must be achieved within the organisation as well as with the business environment. To accomplish this alignment, leaders have to be open to learning about how their decisions and behaviours fit the environment, strategy and organisation. This suggests that effective leaders enable their organisations to confront the tensions that prevent alignment and, through a collaborative process, reshape alignment at several levels: between environment and strategy, strategy and organisation, organisation and the leadership team, and between key people (Porter, 2008).

As the best practices and new competencies start to become entrenched, the organisation and its people become increasingly ready to transform the organisation. This is the step where it becomes possible to expect and demand the wide spread execution of strategic leadership and competitiveness practices, and to require leaders across all levels to live the values that accompany this shift. In change leadership terms, it is the time when it is both possible and desirable to increase the pressure to practice the strategic leadership requirements (Rowe, 2001).

By this stage all policies and procedures, as well as practices that contribute to organisational development and culture should be aligned to the shift towards good strategic leadership practices. (See Rowe, 2001: Figure 2).

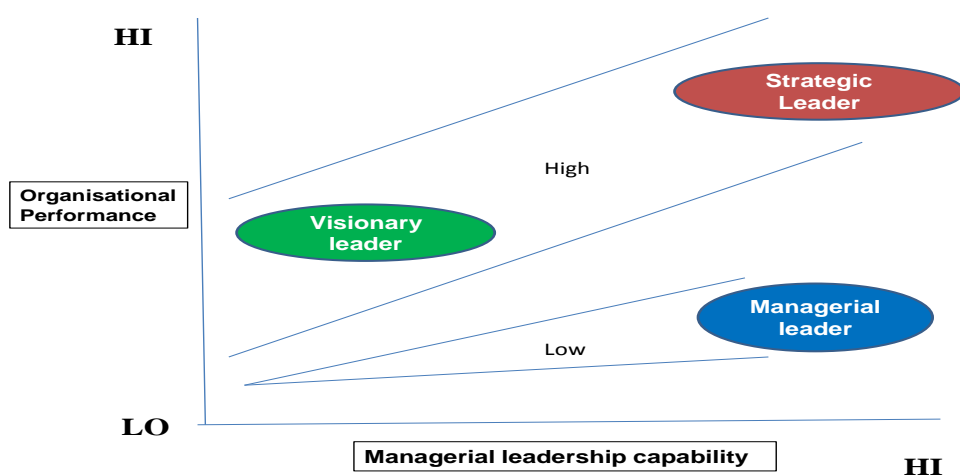


Figure 1

Organisational performance and managerial, visionary and strategic leadership

Source: Rowe (2001:84)

Montgomery (2008) further stated that it is the responsibility of the executive leadership to formulate a challenging view of the future, providing the organisation with a clear idea of where threats could come from and how the organisation is positioning itself to cope with it. Having some certainty, amidst the uncertainty of the future, is crucial. While endless scanning and assessing of all factors cannot pre-empt future threats completely, all employees in the organisation have to know that there is a plan to cope with some eventualities.

4.2.1 The leader's responsibility for the implementation of strategy

In the past, strategy execution tended to be top down; in future, strategy execution rests with everyone. The 'what' of strategy will always come top down, so it is the execution that is different in future organisations. Organisations can all go about their business brainstorming and creating something they call strategy, but the institutional capacities and capabilities of driving it through onto ground level is a totally different challenge.. In the past leadership was clear – they knew who the leader was and who the followers were. In future, the leader sometimes needs to be a follower. Collins (2005:9) has brilliantly put it forward that: "We cannot see something from the perspective of another if we do not have deep humility, because without it we impose our own perspective or analyse things from our own perspective only; we will not see the other person's viewpoint". What this means is that the leaders of an organisation need to readdress their role in terms of practices and power. Organisations need to consider whether their leaders recognise, appreciate and embrace their power (Nel & Beudeker, 2009).

4.3 Strategic leadership and organisational performance

Many organisations can appear to be high performers in the short run – by riding favourable market conditions, for example, or by being fortunate with a single product or market position – only to decline quickly when business conditions turn against them.

To be a true high performer, an organisation must survive and thrive across economic and market disruptions. To measure the performance of organisations, it is important not to only use a single measurement, but to use different dimensions. Breene and Nunes (2006) proposed, after many years of qualitative and quantitative research towards the performance of organisations, that the following five dimensions (critical success factors) can be used as measurement, grading each on a curve against competitors in a carefully considered peer set:

- **Growth** - as measured by revenue expansion.
- **Profitability** - as measured by the spread between the return on assets and cost of capital.
- **Positioning for the future** – as represented by the position of share price that cannot be explained by current earnings and by the position of the industry total each organisation's future value represents.
- **Consistency** - as measured by the number of years out of seven the peer set median in profitability, growth and positioning for the future was beaten.

The delicate balance when it comes to metrics is that one must always weigh simplicity against completeness.

The role of leadership is of fundamental importance to the performance and success of organisations. This includes many aspects like visionary, motivator, enabler, facilitator as well as mentor and coach. Its importance has been identified in the work of Fawn and Leavy (see Breene & Nunes, 2006). Their research aimed to establish the portfolio of attributes exhibited by leaders in two groups of organisations. The attributes with the highest ranking are those which are intuitive and require exceptional leadership skills. They are direction, vision, selection of key personnel, people motivation and communication.

Every high performing business organisation also has a high performance culture. If you spend any amount of time with leaders and employees of a high-performance business organisation, you will get an almost palpable sense of the organisation as a distinctive community. Nel and Beudeker (2009:12) call this a "village of leaders" as a unique way to approach the core and common business elements related to culture, leadership and workforce. A culture of performance embodies an organisation's unique approach to managing those elements common to every organisation, and is therefore crucial to long-term effectiveness, the quality and speed of decision making and the mastery of change and innovation.

There is, however, a practical challenge that an organisation will have to consider at all times. This study provides insights into the best operating practices that sustainably competitive organisations have entrenched through many years of exquisite effort and focused leadership. It is impossible to achieve success with one great leap and there is no evidence at all of any organisation that has ever achieved world class performance in a short period.

5. Research methodology

Against the backdrop of the literature review provided, it is expected that operational strategy and organisational performance will be influenced by strategic leadership practices. Strategic leadership can, therefore, be viewed as a competency that is the capability of creating capabilities within an organisation by the acquisition, recombination and renewal of these activities and resources (Eisenhardt *et al.*, 2000; Miller, Eisenstat, & Foote, 2002).

The purpose of this quantitative study was to determine how strategic leadership has a direct impact on operational strategy and organisational performance in business organisations in South Africa. A cross-sectional survey design consisting of two phases was used: a pilot study to test the measuring instrument and the administration of the telephone survey. The results of the pilot study determined the refinement of the questionnaire. A telephone survey was conducted by an independent organisation from January to March 2009.

The sample selected for this study consisted of the top 200 performing organisations that were part of the Financial Mail survey of 2008. The organisations represent all major industry groups. Financial and industry performance information has been used from the 2008 Financial Mail survey.

In this survey, the performance of these organisations was measured over a five year period to ensure consistency in their performance. The respondents in the survey have been the chief executive officers (CEOs) or a member of the senior executive group. Their responsibilities in their organisations give them a unique and comprehensive view of strategic leadership activities.

All 200 top performing organisations in South Africa for 2008, as published in the Financial Mail survey, were part of the sample. A total of 118 valid responses were received with a response rate of 59 percent. Data was captured electronically during the interview.

A measurement instrument was developed to measure the impact of strategic leadership on operational strategy and organisational performance. Items of existing measurement instruments were combined, expanded, adapted or reduced as required to achieve the goals of the study, taking the prerequisites of validity and reliability into account. The measurement instrument needed to measure:

- Strategic leadership (independent variable)
 - Action
 - Coherence
 - Discipline
- Strategy orientation (dependent variable)
 - Strategy creation and formulation
 - Strategy execution
- Operational excellence (dependent variable)
 - Cost management
 - Product differentiation
 - Integration
- Organisational performance (dependent variable)
 - Return on assets (ROA)
 - Earnings per share (EPS)
 - Self reported performance

To measure strategy orientation in the sample companies the two scales of strategy creation and strategy execution were used based on Treacy and Wiersema's (1995) strategy model. Organisations were asked: "To what extent do the following statements best describe your workplace's competitive strategy"?

Porter (1996) argues that operational excellence can be seen as a particular type of cost-management positioning. He also states that organisations can only attain a competitive advantage and earn superior returns if they pursue a dedicated positioning strategy. Tracy and Wiersema (1995) include more than just cost-management as operational effectiveness. They refer to practices that allow a company to better utilise its inputs by developing better products faster and reducing defects in products. The effective integration of functional areas is also a key factor for operational effectiveness and offers different advantages in successful management of industry change (Kaplan & Norton, 2004).

Organisational performance was measured using the two financial based measurements of ROA en EPS, as published in the Financial Mail (2009) survey, listing the 200 top performers in South Africa in 2008. In addition to financial measures, self-reported performance measures were used in this study. Organisations were asked to indicate their current level of

performance relative to their competitors for each of the six performance measures. These performance measures were adaptive leadership, autonomy, communication, processes and systems, knowledge and values. These were enhanced by questions formulated by the researcher, and based on the literature to ensure that each variable in the measuring instrument was represented by at least three items.

Cronbach Alpha coefficients were computed and used to assess the internal consistency of the measuring instrument on responses obtained from the pilot study. The estimated Cronbach Alpha coefficients for the independent variable of the strategic leadership constructs of action, coherence and discipline were 0.77, 0.76 and 0.75 respectively. The Cronbach alpha coefficients of the dependent variables of strategy orientation were 0.76 and 0.66 respectively. With regards to the dependent variable of operational excellence, the Cronbach Alphas were 0.71, 0.87 and 0.72. All the researched coefficients would appear to satisfy Nunnally's (1978) suggested minimum criterion for internal reliability.

The data were analysed by using the Statistica (Stratsoft, 2006; 2007) programme. Exploratory data analysis (EDA) was used to assess individual variables, and descriptive statistics – such as means and standard deviations – were used to describe the data. Additionally, inferential statistics were employed to determine the relationships between the constructs of strategic leadership and operational strategy as well as organisational performance.

6. Results

Corporate characteristics and a descriptive analysis are presented in this section. The profile of the sample is discussed in terms of two characteristics: annual turnover and the size of the organisation. Thereafter a comparative analysis of the specific dimensions will be discussed.

6.1 Corporate characteristics of respondents

The corporate characteristics of the respondents are discussed in terms of the two variables: number of employees and annual turnover.

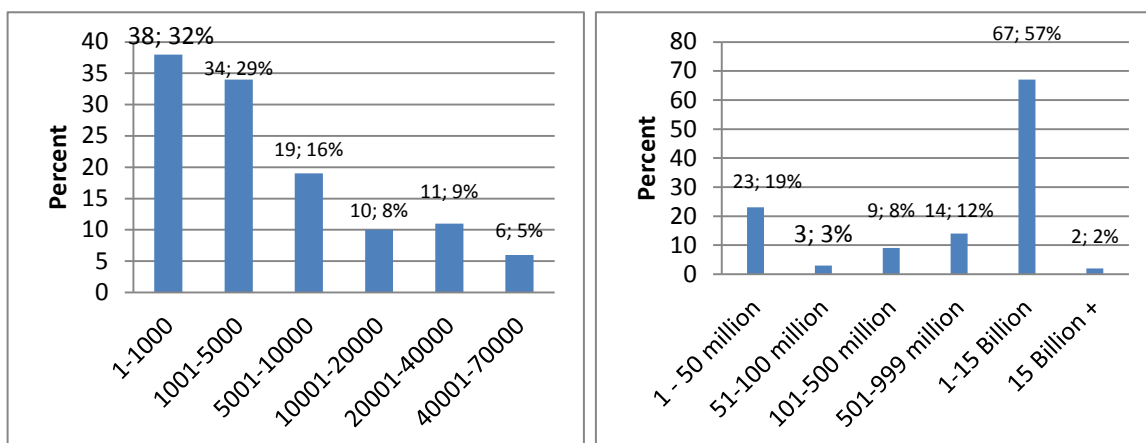


Figure 2

Number of employees and annual turnover

As seen in Figure 3, the largest proportional category was organisations with 1-1000 employees, which represented 38.3% of the respondents. The majority of the organisations (72.61%) have a staff complement of between 1 and 5000 employees. The study also revealed that the majority of the organisations (67.57%) reported a turnover of between 1 and 15 billion rands.

6.2 Descriptive analysis of the dimensions

A descriptive analysis of the dimensions was conducted as part of the exploratory approach to analysis of data. A profile of the respondents participating in the study is shown in Table 1, using mean, standard deviation and Cronbach Alpha.

Table 1

Descriptive statistics of constructs

Dimension	N	Mean (total score)	Standard deviation	Cronbach alpha
Strategic leadership				
Action	118	27.07	4.14	0.77
Coherence	118	21.72	3.42	0.76
Discipline	118	35.40	5.02	0.75
Operational strategy				
Creation and formulation of strategy	118	19.54	3.89	0.76
Execution of strategy	118	20.42	3.11	0.66
Organisational performance				

Cost management	118	21.31	3.08	0.71
Product differentiation	118	28.23	4.43	0.87
Integration	118	26.74	4.11	0.72
Adaptive leadership	118	20.67	3.33	0.72
Autonomy	118	21.52	3.04	0.72
Communication	118	19.00	4.12	0.90
Process & systems	118	28.24	3.88	0.72
Values	118	22.41	3.25	0.77
Knowledge	118	21.18	2.88	0.43

The respondents answered all the questions pertaining to strategic leadership, operational strategy and organisational performance. The mean of strategic leadership (action, coherence and discipline) constructs were calculated from both the operational strategy as well as organisational performance constructs. The standard deviation shows how the observations are spread around the mean.

6.3 Comparative analysis

In this section the aim is to determine whether certain key variables are significantly associated, and furthermore whether certain sub-groups are significantly different. Correlations among certain variables were calculated and the p-values were used to determine whether the differences among the constructs were significant. The focus is on the following specific dimensions:

- Strategic leadership and operational strategy
- Strategic leadership and organisational performance

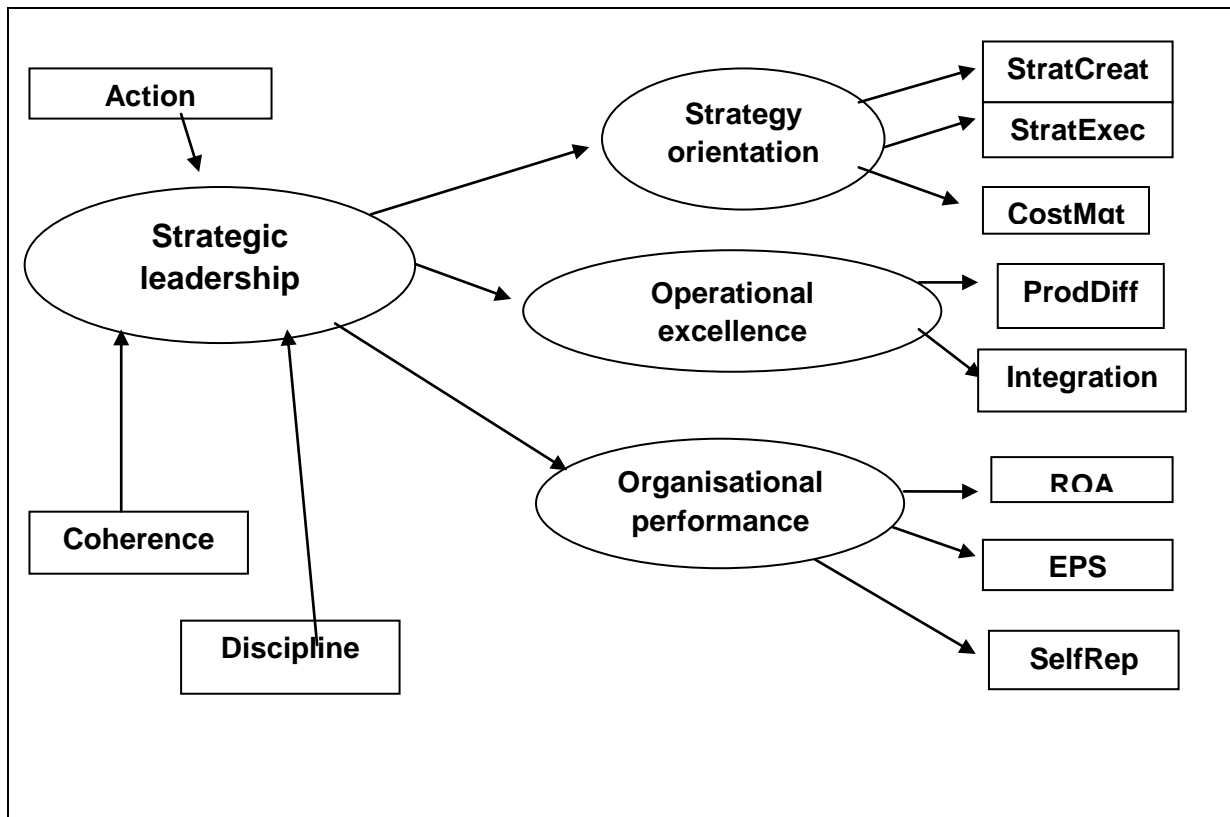


Figure 3:

An illustration of the conceptual correlation model of strategic leadership, strategy orientation, operational excellence and organisational performance

Figure 4 illustrates the influence of strategic leadership re-conceptualised as three interrelated constructs of action, coherence and discipline as exogenous constructs. Endogenous constructs of strategy orientation, operational excellence and organisational performance are also displayed. Strategy orientation is measured by the ability to create a strategy (StratCreat) as well as to execute the strategy effectively (StratExec). Operational excellence is measured by cost management (CostMgt), product differentiation (ProdDiff) and integration (Integration). Finally, organisational performance is measured by ROA, EPS and self reported measurements (SelfRep).

As discussed in this study, strategic leadership literature highlights these characteristics as having an impact on the operational strategy and performance of business organisations.

6.3.1 The influence of strategic leadership on operational strategy

Theoretically speaking, the three constructs of strategic leadership (action, coherence and discipline) should exert a strong effect on strategy orientation and its dimensions. These relationships were examined by means of correlation analysis.

The results of the correlation analysis are shown in Table 2. The Spearman correlation coefficients (ρ) and p-values of the separated dimensions of strategy orientation are shown with the strategic leadership constructs. Saunders *et al.* (1997:321) remarked that a correlation of +0.3 indicates a weak positive correlation and +0.7 a strong positive correlation.

Table 2

A summary of the correlation analysis (r) and p-values as well as the Spearman correlation coefficient comparing the dimensions of strategy orientation with the constructs of strategic leadership

Dimensions of strategy orientation	n	Correlation analysis (r)	Correlation analysis (P-value)	Spearman correlation (ρ)	Spearman correlation (p-value)
Action versus Execution of strategy	118	0.71	0.0000	0.64	0.00
Coherence versus Creation of strategy	118	0.76	0.0000	0.74	0.00
Coherence versus Execution of strategy	118	0.76	0.0000	0.68	0.00
Discipline versus Creation of strategy	118	0.62	0.0000	0.62	0.00

a) Action versus execution of strategy

The data from the study shows a strong positive relationship between action and the execution of strategy ($r = 0.71$; $p = 0.0000$). The Spearman correlation coefficient also

indicates the same relationship ($\rho = 0.64$; $p = 0.00$). The correlation analysis and scatter-plot shown in Figure 6.8 are indicative of a strong, positive relationship between action and execution of strategy as the data points illustrated the cluster in close proximity to the trend line.

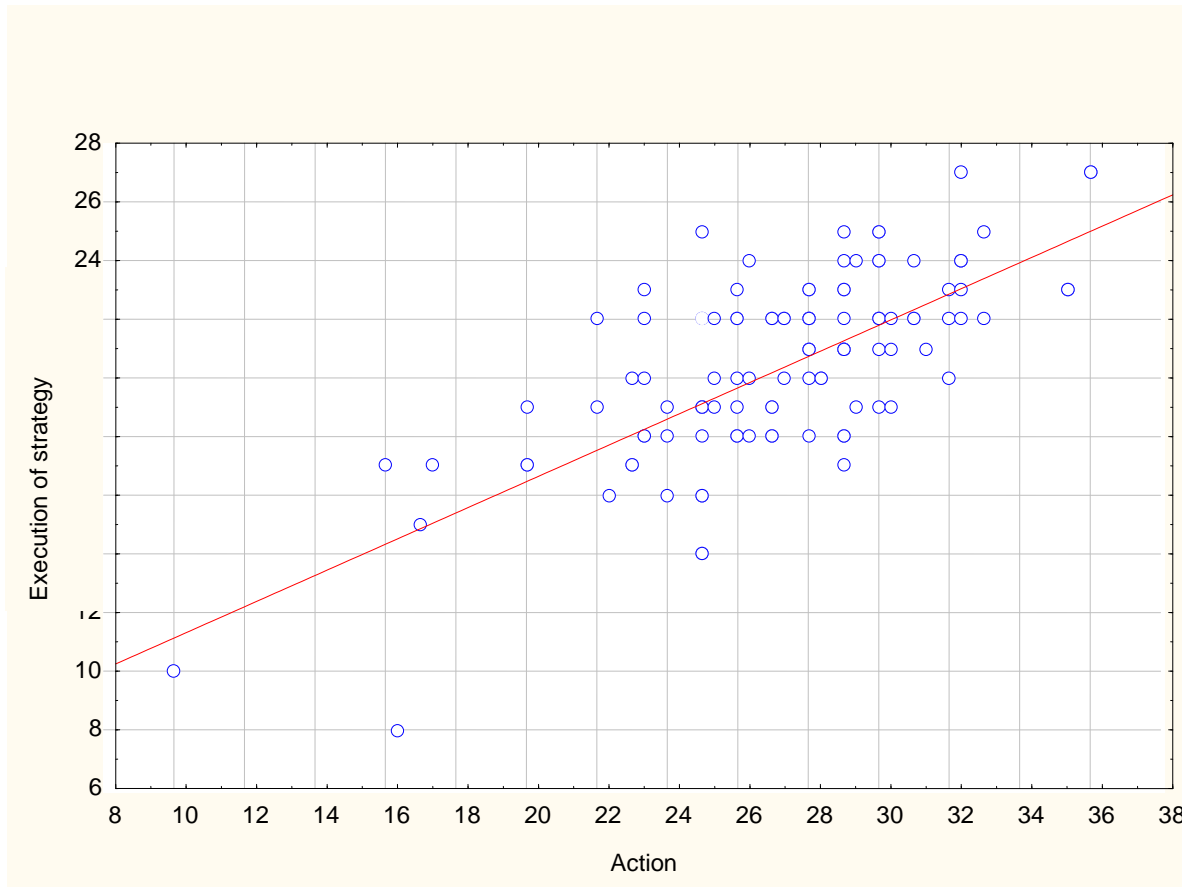


Figure 4.

A scatter-plot representing the nature and strength of the relationship between action and execution of strategy

As indicated earlier, Hitt, Ireland and Hoskisson (2007) defined action as the component of strategic leadership that determines strategic direction and exploits core competencies. These aspects are both crucial in the process to execute the strategy of the organisation. If the organisation does not have a strategy and people do not have the necessary competencies it will be impossible to effectively execute the strategy. As discussed above, this study has confirmed a strong, positive relationship ($r = 0.71$) in the sample organisations between action and the execution of the strategy which is indicative of the theory discussed in this study.

6.3.2 The influence of strategic leadership on organisational performance

Table 3

A summary of the correlation analysis (r) and p-values as well as the Spearman correlation coefficient, comparing the dimensions of self reported organisational performance with the constructs of strategic leadership

Dimensions of organisational performance	n	Correlation analysis (r)	Correlation analysis (P-value)	Spearman correlation (ρ)	Spearman correlation (p-value)
Action versus Adaptive leadership	118	0.69	0.0000	0.65	0.00
Action versus Processes and Systems	118	0.67	0.0000	0.58	0.00
Action versus Knowledge	118	0.58	0.0000	0.48	0.00
Coherence versus Autonomy	118	0.72	0.0000	0.66	0.00
Coherence versus Communication	118	0.69	0.0000	0.69	0.00
Coherence versus Knowledge	118	0.69	0.0000	0.66	0.00
Discipline versus Adaptive leadership	118	0.69	0.0000	0.64	0.00
Discipline versus Processes and Systems	118	0.61	0.0000	0.53	0.00
Discipline versus Values	118	0.65	0.0000	0.57	0.00

The second hypothesis in this study is that strategic leadership (action, coherence and discipline) is directly and positively associated with organisational performance. Strategic leadership should, therefore, also have a positive effect on organisational performance and

its dimensions. These relationships were examined in this study by means of correlation analysis and Spearman's correlation coefficient.

The results of the correlation analysis on the relationship between strategic leadership and organisational performance are shown in Table 2. The Spearman correlation coefficients and p-values of the separated dimensions of organisational performance are shown with the strategic leadership constructs. Saunders *et al.* (1997:321) remark that a correlation of +0.3 indicates a weak positive correlation and +0.7 a strong positive correlation.

a) *Action versus adaptive leadership, processes and systems and knowledge*

The data from the study showed a strong positive relationship existed between action and adaptive leadership ($r = 0.69$; $p = 0.0000$); action and processes and systems ($r = 0.67$; $p = 0.0000$) as well as action and knowledge ($r = 0.58$; $p = 0.0000$). The Spearman correlation coefficient indicates an equally strong relationship ($\rho = 0.65$; $p = 0.00$) towards action and adaptive leadership; action and processes and systems ($\rho = 0.67$; $p = 0.00$) as well as action and knowledge ($\rho = 0.67$; $p = 0.00$). The correlation analysis and scatter-plots shown in Figure 6 are indicative of a strong positive relationship between action and adaptive leadership, as the respondents illustrated cluster in close proximity to the trend line.

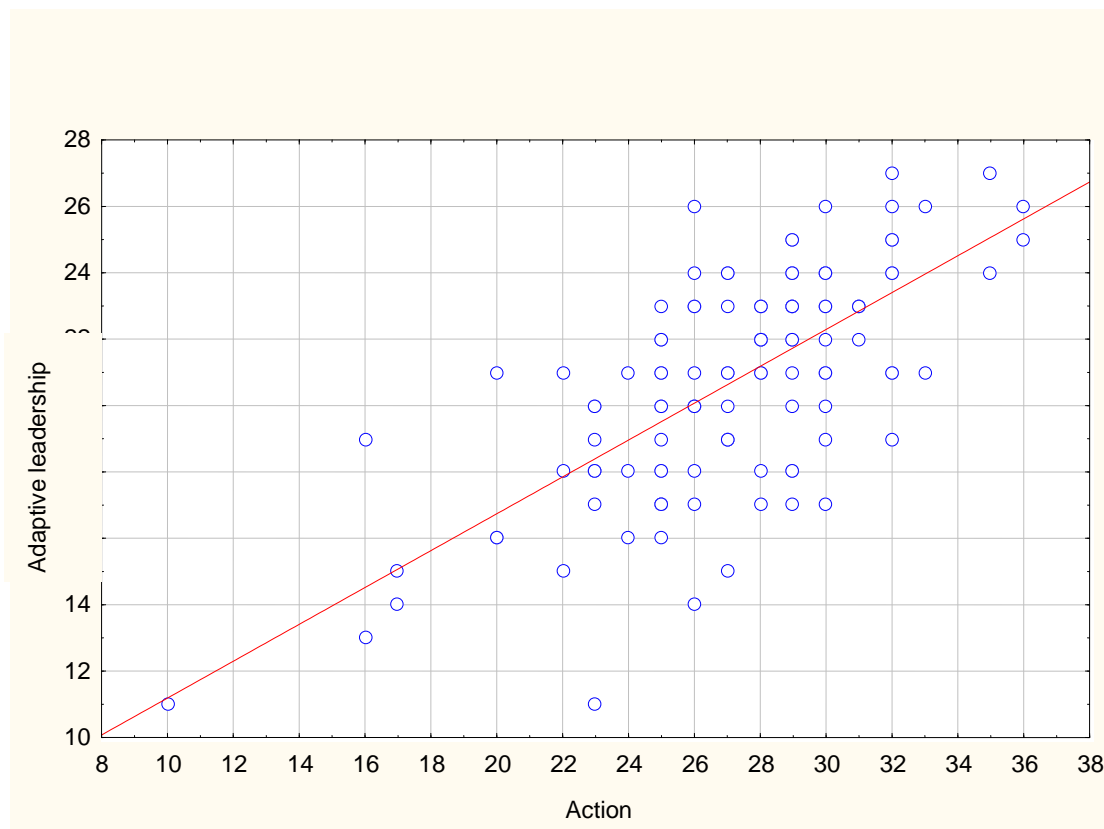


Figure 5: A scatter-plot representing the nature and strength of the relationship between action and adaptive leadership

Based on the Cronbach alphas, the correlation analysis and scatter-plots as shown in Figures 5 and 6, both hypotheses one and two can be assessed. Null hypothesis one and two (H01 and H02) contends that no relationship exists between strategic leadership and operational strategy orientation as well as strategic leadership and organisational performance. The alternative hypothesis (HA1 and HA2) is, therefore, that a positive relationship exists between strategic leadership and operational strategy as well as between strategic leadership and organisational performance. As indicated in Figures 5 and 6, there is a strong, positive statistically significant relationship between strategic leadership and operational strategy. There is also a strong, positive relationship between strategic leadership and organisational performance. Based on these findings, the null hypothesis is not supported. By implication, the literature and the respondents who participated in this study, confirmed that strategic leadership is directly and positively associated with the operational strategy and organisational performance in business organisations in South Africa.

The empirical research done in this study supplemented the theory surrounding strategic leadership by suggesting that if leadership in organisations practice effective strategic leadership principles, this strategic competitiveness will give them an advantage to survive in a turbulent and uncertain economy.

7. Discussion of results

The discussion of results in this section will focus on the relationship between strategic leadership and operational strategy as well as the relationship between strategic leadership and organizational performance

7.1 The relationship between strategic leadership and operational strategy

As mentioned in this study, operational strategy includes strategic (directional) orientation and operational excellence of the organisation. The relationship between strategic leadership and strategy orientation was found to be statistically significant as the dimensions of strategic leadership (action, coherence and discipline) all measured between 0.62 and 0.76 with p-values of 0.0000 as indicated by the correlation analysis. The Spearman coefficient correlation analysis confirmed this relationship (ρ = between 0.62 and 0.74; p-values of 0.00).

The **creation and formulation of a compelling strategy** is extremely important for any business organisation as it determines the future direction of the organisation as well as exploits the core competencies of the employees. In this study it was also confirmed that organisations need to develop their human capital in order to perform according to the new goals and direction. The respondents in the study also confirmed the importance of establishing effective strategic controls and to sustain a corporate culture that emphasises ethical practices.

According to Stewart (2007) the sobering fact is that less than 10 percent of strategies effectively formulated are effectively implemented. The **execution of the strategy** is, therefore, critically important. In this study the very important relationship between strategic leadership and the execution of the strategy was confirmed by the respondents. Through this, the sample organisations acknowledged that they need to establish strategic controls to make sure that the strategy is effectively executed. There also needs to be a corporate culture that all the employees understand the strategy and also know what their role is to make the strategy work.

This study confirmed the relationship between strategic leadership and **operational excellence** in business organisations in South Africa as the results of the correlation analysis showed strong positive relationships between strategic leadership and cost management as well as strategic leadership and integration (refer to hypothesis 1). The study did, however, reveal a weak positive relationship between strategic leadership and **product differentiation**. The price leader position seems to be a danger as it can quickly become a commodity seller position, which leads to a lower ROA. This is consistent with Porter's (1996) contention that operational effectiveness is not strategy. Therefore operational excellence is best seen as a basis, and perhaps a prerequisite, for the growth orientated strategies of product leadership and integration of the functional areas of the organisation.

Cost management has always been one of the major challenges in business organisations and it has a direct and indirect impact on the operational effectiveness of the organisation. Even if the organisation has an acceptable or high turnover and it does not have the ability to manage and control the costs, the organisation will find it very difficult to survive. This is even more applicable in the current turbulent environment where the global economy is heading towards a recession. The strong positive relationship between strategic leadership and cost management was confirmed in this study.

Finally, it was confirmed in this study that leadership must have the discipline to create a culture and environment where all people and departments in the organisation have the ability to **integrate** their competencies, initiatives and skills.

7.2 The relationship between strategic leadership and organisational performance

The literature in this study asserted that high performance strategic leadership practices will help organisations to enhance their performance while competing in changing environments. The literature was empirically confirmed in South African business organisations with the correlation analysis done in this study on the relationships between strategic leadership constructs and self reported organisational performance dimensions. All the constructs of strategic leadership and self reported organisational performance measured a strong, positive statistically significant relationship.

Adaptive leadership showed a strong, positive relationship with strategic leadership, which confirms the importance of leaders engaging in adaptive work by providing direction and protects the employees by managing the rate of change. The respondents also confirmed the importance of the leaders' ability to orient people to their new roles and responsibilities. The leader should also help the people in the organisation to maintain those norms.

Autonomy, also referred to as work discretion, showed the strongest significant relationship with strategic leadership of all the self reported performance dimensions. This means that the leadership's ability and discipline to permit employees to make decisions about performing their work in a way they believe is most effective is extremely important. This is even more challenging in a diverse South African business environment, where strategic leaders of the sample organisations confirmed the importance of this relationship.

The data from this study confirmed the statistically significant and strong relationship between strategic leadership and effective **processes and systems** in the organisation. The literature in this study suggested that the business is a complex, adaptive system populated by purposeful, interdependent people. The leadership, therefore, needs to understand the whole system in the organisation as one system concept in an organisation contains the others. The study suggested that it is therefore no longer just the products that are important, it is the *process* that is important.

The Cronbach alpha for **communication** was measured as the highest in the study at 0.90 which confirms the reliability of this construct. The importance of good communication in business organisations was suggested by the literature and confirmed by this study for

business organisations in South Africa. In order to perform, people at all levels need to be informed as all planning processes are, at the core, vehicles for communication.

This literature in this study found that **values** is especially relevant not just for top-level executives, but for all employees, who constantly need to balance demands from their stakeholders, the market, because it highlights the leader's and all the people in the organisation's capability to change. The empirical data in this study confirmed this notion as values showed a consistent positive relationship with strategic leadership. The test for first-rate leaders in business organisations in South Africa is, therefore, the ability to exhibit contradictory or opposing behaviours while still maintaining some measure of integrity, credibility and direction.

In this study the relationship between strategic leadership and **knowledge** was measured as statistically significant and positive (refer to hypothesis 2). The literature, through Rudnitsky (1996:56), suggested that: "We are in the knowledge business". Leaders in business organisations in South Africa confirmed that an organisation's productivity will lie more in its collective capacity to gain and use knowledge, rather than in its hard assets such as land, plant and equipment.

8. Summary and conclusion

The main contribution of this study was the assessment that strategic leadership is directly and positively associated with operational excellence and performance in business organisations in South Africa. The managerial implications of the proposed model constructed in the study are that leadership and executives in business organisations are able to implement high performing strategic leadership practices to enhance the strategy orientation and operational excellence in their organisations.

This study also supplemented the theory surrounding strategic leadership by suggesting that if organisations formulate and execute their strategies effectively, this strategic competitiveness will give them an advantage to survive in an turbulent and uncertain new economy. It also suggested that if organisations manage their costs effectively and focus on a product differentiation and the integration of their people, they will perform well and yield above average returns.

The study identified several avenues for further research by using different research methods and examining the impact of strategic leadership in different contexts. Future researchers should examine the impact of strategic leadership on the operational strategy

and performance in different business sectors as well as in public organisations in order to have a holistic view on the impact of strategic leadership on the performance of organisations in South Africa with its diverse and uncertain environment.

Competition in the remainder of the 21st century's global economy will be complex, challenging and filled with competitive opportunities and threats. This study asserted that effective strategic leadership practices could help organisations enhance their performance while competing successfully in the turbulent and unpredicted South African environment.

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A MANUFACTURING PERSPECTIVE OF EMPLOYEE ENGAGEMENT IN THE WORKPLACE

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ABSTRACT

This paper investigates the level of employee engagement in the workplace. The theoretical foundation explains the nature of employee engagement. An empirical survey was conducted, using a self-administered questionnaire, which was completed by 120 employees in a manufacturing organisation in the Nelson Mandela Metropole. Fifteen null-hypotheses, investigating relationships between the dependent and independent variables are tested. Highly significant relationships were found between the degree or level of employee engagement and the factors influencing engagement and its outcomes. These factors are communication, leadership behaviour, recognition and rewards, recruitment and selection, flexible work-life practices and training and development. By improving the degree of engagement, organisations reap the rewards of improved productivity, reduced safety incidents and customer satisfaction. Engaged employees are also less likely to leave the organisation and are committed to doing quality work. Specific guidelines are provided to improve employee engagement in the workplace.

“Work engagement is a positive, fulfilling, work-related state of mind that is characterised by vigour (high levels of energy and mental resilience while working), dedication (strongly and enthusiastically involved in one’s work) and absorption (fully concentrated and happily engrossed) ...” (Bakker and Demerouti, 2008:209)

INTRODUCTION

Vehicle production is the second largest industry in South Africa's manufacturing sector. Overall, the automotive industry, including manufacturing, distributing and servicing of vehicles and components, is the third largest sector in the economy (South Africa's Automotive Industry, 2008:1). The sampling unit for this study forms part of the automotive component which supply seat covers to local and overseas automobile manufacturers. The manufacturing of automotive seat covers are labour intensive and very little can be done to automate processes. Employee engagement is defined as the extent that an employee believes in the mission, purpose, and values of an organisation. It demonstrates commitment through their actions as employees and their attitude towards the employer and customers (Stockley, 2007:1). Employees who are engaged want to contribute, have a sense of belonging, defend the organisation, work hard and are not interested in moving to other employers. This significantly affects an organisation's financial performance (Minton-Eversole, 2007:20). Engagement measures the level of connection employees feel with their employer, as demonstrated by their willingness and ability to help their organisation succeed, largely by providing discretionary effort on a sustained basis (Gebauer, 2008).

Woodruffe (2005:28) concurs that engagement is increasingly being used at an organisational level to denote the idea of an employee being fully intellectually and emotionally committed to a particular job, so that he or she wants to give to that job what is known as discretionary effort. Discretionary effort is the effort that he or she wants to give, as opposed to what they are obligated to give. Robison (2007) classifies employees into one of the following three categories: engaged, not engaged, or actively disengaged. Engaged employees work with passion and feel a profound connection to the organisation – they drive innovation and move the organisation forward. Not-engaged employees are employees who are at work, but are making no active contribution to the success of the organisation – they are putting in their time, but no energy or passion into their work. Actively disengaged employees are not just unhappy at work, but also demonstrate their unhappiness and undermine the efforts of engaged workers.

This paper will focus on the degree/level of employee engagement, what specific factors influence engagement and the effect this has on business success. The specific outcomes of employee engagement will also be addressed.

PROBLEM STATEMENT

Durkin (2007:31) maintains that employees are loyal to an organisation when they connect to the purpose of their work, the vision of the organisation and when they think their contributions are making a difference. This loyalty leads to pride in their work which means that they are apt to produce a better product. Korn (2001:1) states that without data it is difficult to see beyond well-known theories how employee behaviour is linked to business outcomes. Coffman, Harter and McMurray (2001:1) indicate that on a macro-level a five-percentage decrease in the amount of actively disengaged employees would boost the United States' productivity by \$79 billion a year. It also needs to be determined what the relevance of the human factor is with respect to employee engagement. The costs of poor quality are the costs that result from products not meeting customer specifications, or do not meet the designer's intent. These costs are categorised into internal failure costs, including scrap and rework. It also includes appraisal costs (inspection) and prevention costs (systems and procedures). External costs include the cost of rework, inspection, and warranty investigations, which results after the product has left the manufacturing facility (Jacobs and Chase, 2006). If these costs are not incurred it could contribute to the overall profitability of an organisation. Coffman *et al.*, (2001:1) emphasize that engagement is crucial because it enhances productivity. Organisations typically start to address gaps in employee engagement by conducting engagement surveys (Stevenson, 2007:8). Swanepoel, Erasmus, Van Wyk and Schenk (2003:760) indicate that human resource management

should add value to the organisation's goal of being successful. While employee engagement is at best applied through all departments in an organisation, it should remain a key performance metric of human resource professionals. Engagement should become part of management's daily work activities. All managers and not only HR should own and practice engagement which will ensure it becomes not just another passing fad (Welbourne, 2003:2). This lead to the research question to be addressed in this paper: *To what extent are employees engaged in the workplace and what is the impact on business success?*

OBJECTIVES

Primary objective

The primary objective of this study is to investigate the level of employee engagement and the possible impact engagement has on business success.

Secondary goals

To achieve this primary objective, the following secondary goals are identified:

- To highlight the nature and degree of employee engagement.
- To empirically assess the factors that influence employee engagement and its impact on business success (outcomes).
- To provide guidelines that can be taken to improve the level of employee engagement.

The next section will provide a theoretical overview of employee engagement.

A LITERATURE OVERVIEW OF EMPLOYEE ENGAGEMENT

Concept clarification

It became evident from the literature study that employee engagement is defined differently by various organisations and authors. Vance (2006:2) explains that there are common themes that emerge, including employees' satisfaction with their work and pride in their employer. It also includes the extent to which people enjoy and believe in what they do. Stockley (2007:1) defines engagement as the extent that an employee believes in the mission, purpose, and values of an organisation and demonstrates that commitment through their actions as an employee and their attitude towards the employer and customers. Engagement measures the level of connection employees feel with their employer, as demonstrated by their willingness and ability to help their organisation succeed, largely by providing discretionary effort on a sustained basis (Gebauer, 2008). For the purpose of this paper engagement will be regarded as the extent to which employees apply discretionary effort to achieve business success.

Engagement models

Four engagement models currently used by organisations were identified in the literature study: the attraction, retention and engagement model (Gebauer, 2008); Towers Perrin (2003); structural equation model (Langford, Parkes and Metcalf, 2006) and the higher performance model (Vance, 2006). The four models were used to identify common trends, influences, and outcomes of employee engagement. For the purpose of this paper, Gebauer's model will be used and discussed below. Gebauer (2008) indicates that engagement is not only part of a person's genetic make-up but can be created if the key factors that influence engagement in an organisation is understood and effectively managed. These key influences identified are shown in Table 1. The factors that attract people to an organisation are different to those factors that retain them and different factors maintain their engagement while employed.

TABLE 1
GEBAUER'S DRIVERS OF ATTRACTION, RETENTION AND ENGAGEMENT MODEL

Top attraction drivers	Top retention drivers	Top engagement drivers
Competitive base pay	Organisation's reputation as a great place to work	Senior management sincerely interested in employee well-being
Career advancement opportunities	Satisfaction with the organisation's people decisions	Improved my skills and capabilities over the last year
Challenging work	Good relationship with supervisor	Organisation's responsibility for social responsibility
Convenient work location	Understand potential career track within organisation	Input into decision making in my department
Flexible schedule	Ability to balance my work/personal life	Organisation quickly resolves customer concerns
Learning and development opportunities	Fairly compensated compared to others doing similar work in my organisation	Set high personal standards
Vacation/ paid time off	Work in environment where new ideas are encouraged	Have excellent career advancement opportunities

Reputation of organisation as a good employer	Competitive training	Enjoy challenging work assignments that broaden skills
Reasonable workload	Input into decision making in my department	Good relationship with supervisor
Organisation's financial health	Organisation's reputation for social responsibility	Organisation encourages innovative thinking

Source: Adapted from Gebauer (2008)

Measuring the level of employee engagement

A common question relating to employee engagement is how it should be measured. McManus (2007) identified that a common measure used is the number of ideas submitted per employee per year. This measure indicates the employees' willingness to improve business success by making improvement suggestions. While suggestions could be linked to recognition, the danger is that the employee could merely make the suggestion to be recognised and not necessarily to contribute to the success of the organisation. The success of the organisation is therefore not as a direct result of the employee's engagement, but rather a spin-off from his or her needs to be recognised. Vance (2006:6) found the following common themes used by organisations to measure engagement: pride in employer; satisfaction with employer; job satisfaction; opportunity to perform well at challenging work (supportive work environment); recognition and positive feedback for one's contributions (recognition and rewards); personal support from one's supervisor (coaching and mentoring); effort above and beyond the minimum (discretionary effort); understanding the link between one's job and the organisation's mission (visionary leadership practices and communication); prospects for future growth with one's employer (training and development) and intention to stay with employer (employee retention).

Robison (2007) proposed 12 key elements, listed in the statements below, as good predictors of employee engagement. The employee:

- Knows what is expected of him/her at work.
- Has the materials and equipment needed to do the work right.
- Has the opportunity to do what he/she does best every day.
- Has received recognition or praise in the last seven days for doing good work.
- Feels that his/her supervisor, or someone at work, cares about him/her as a person.
- Is encouraged by someone at work to learn and develop.
- Feels that his/her opinions count at work.

- Feels that his/her job is important, based on the mission or purpose of the organisation.
- Believes that fellow employees are committed to doing quality work.
- Has a best friend at work.
- Received some feedback on progress in the last six months.
- Had opportunities to learn and grow at work in the last year.

By answering the above statements, an employee gives an indication of whether the factors that influence engagement are present or absent in the workplace. This allows the organisation to ascertain the variation in the level of engagement across the organisation (Robison, 2007).

Factors influencing employee engagement

Table 2 provides an overview of the factors that could influence employee engagement in the workplace.

TABLE 2
FACTORS INFLUENCING EMPLOYEE ENGAGEMENT

Factor	Contribution	Authors
Communication	<ul style="list-style-type: none"> • Crucial role in getting employees to feel part of the organisation and get buy-in into the vision, mission, and goals of the organisation. • Employees are aligned to organisational goals when managers keep communication channels open sending a message that the employee matters. • Effective communication creates engaged employees and loyal customers who in turn create bigger profits. • Organisations could improve their productivity and safety ratings through engaging employees by means of carefully managing communication to build trust. 	Durkin (2007:32) Parsley (2006:10) Wallace and Trinkka (2009:10) Shaffer (2004:22)
Leadership behaviours	<ul style="list-style-type: none"> • Leadership, through coaching and mentoring, of an employee's immediate manager is regarded 	Wallace and Trinkka (2009:10)

	<p>as the most important organisational driver of employee engagement.</p> <ul style="list-style-type: none"> • Engagement occurs naturally when leaders are inspiring and visionary – employees feel engaged when their work is considered important and meaningful. • Leaders should ensure work assignments are stretched-learning assignments and actively help align learning opportunities with the employee's interests. 	<p>Wildermuth and Pauken (2008:206) Schneider, Macey, and Barbera (2009:26)</p>
Recruitment and selection	<ul style="list-style-type: none"> • Recruitment policy of an organisation conveys certain messages that influence future employees' engagement and commitment. • When allowing external recruitment while suitably qualified employees are overlooked employees' level of engagement is negatively impacted. • Recruitment policy could be used to attract people who are upbeat and have a positive attitude. • Do not focus on personality only, but also on skills and industry experience. 	<p>Vance (2006:11) Schneider <i>et al</i> (2009:26) How to generate and maintain employee engagement (2008:6)</p>
Flexible work-life practices	<ul style="list-style-type: none"> • Examples of formal flexible work arrangements include flexi-time, telework and work-from-home practices. • Organisations are encouraged to consider supportive work environments and access to workplace flexibility as essential management practices that contribute to business success. • Flexibility in work hours has been found to be a significant driver of employee engagement. • Organisations that help their employees to work in a way which best supports them in balancing their work and home environments are more likely to have engaged employees. • Organisations should be committed to helping its employees to pursue their careers and 	<p>Richman, Civian, Shannon, Hill and Brennan (2008:195) Pitt-Catsouphes and Matz-Costa (2008:225) Woodruffe (2005:29) Devi (2009:4) Pollitt (2008:15)</p>

	concurrently feel fulfilled in their personal lives.	
Training and development	<ul style="list-style-type: none"> • Induction training makes employees aware of organisation policies and procedures, work schedules, organogram, history, purpose and environment. • Employees could acquire the necessary knowledge and skills to perform their jobs and are more likely to engage fully in their work, because they derive satisfaction from mastering new tasks. • Employees should be more engaged if their jobs are enriched through training and development. • Employees who understand their purpose and mission in the organisation are eager to find ways to accelerate their development and constantly seek information about their development progress. 	<p>Vance (2006:13) Durkin (2007:31)</p> <p>Luthans and Peterson (2001:376)</p>
Recognition and rewards	<ul style="list-style-type: none"> • By applying rewards organisations encourage employees' willingness to go the extra mile rather than doing the minimum. • Form of reward that could be used is competency-based pay whereby employees are rewarded for mastering job-relevant knowledge which might increase engagement by fostering the employees' pride in their new mastery. • By recognising contributions that employees make to sustain the future of the organisation the behaviour is reinforced and the employee would want to repeat this improvement. • When employees receive rewards and recognition from their organisation they will feel obliged to respond with higher levels of 	<p>Townsend and Gebhardt (2008:22)</p> <p>Vance (2006:15) Saks and Rotman (2006:612) Pollitt (2008:13)</p>

	engagement.	
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Outcomes of employee engagement

This section focuses on five common types of employee engagement outcomes.

- **Productivity**

Shaffer (2004:23) reports that several organisations have reaped the rewards of engaging employees by showing measurable improvements in productivity and reducing cost. Earl, Lampe and Buksin (2006) state that when the results of engagement surveys are discussed between managers and their teams, the conversations can lead to increased engagement and productivity. Welbourne (2003:3) states that engagement involves getting rid of the things that block productivity. Creating an engaged workforce therefore also means getting barriers out of the way so that employees can be more effective and productive.

- **Safety**

Shaffer (2003:22) reports that engagement efforts have resulted in a 76 percent decline in work-related accidents. This was achieved by communicating to employees how they can make a difference and providing them with the resources to do their jobs. Williams (2008:40) advocates that to optimise safety requires active employee engagement. The first step to creating a good safety culture in an organisation is to recruit employees who care about safety. This stresses the importance of recruitment in the engagement process. Vance (2006:1) reports that organisations with engaged employees were less likely to have a lost-time safety incident than those who have non-engaged employees. An engaged workforce is also less likely to lost time due to a safety incident. Engaged employees understand how their safety actions influences the overall success of the business. An engaged employee would therefore be less inclined to behave in a manner that may jeopardise his own or his colleagues' safety.

- **Customer satisfaction**

Customer satisfaction is regarded as a measure of how products and services supplied by an organisation meet or surpass customer expectation (Jones and George, 2009:309). In these days of intensive focus on customer satisfaction, employee engagement programs are seen as a key element on the journey to customer service through operational excellence. Organisations must engage their employees if they are to compete on customer service (Schneider *et al.*, 2009:23). Devi (2009:3) indicates that as employees become more engaged, they become less likely to leave the organisation and more concerned about meeting customer's needs. An engaged employee concentrates on giving the customer a reason to return, thus building customer loyalty over time. Recognising the close link

between employee engagement and customer satisfaction, management should place engagement at the centre of their plans to secure the future of the organisation. (Pollitt, 2008:12).

- **Employee retention**

Effective talent management policies and practices demonstrate commitment to human capital, resulting in more engaged employees and lower turnover. Consequently, employee engagement has a significant impact on employee productivity and talent retention. Richman *et al.*, (2008:194) concluded that supportive work-life policies and perceived flexibility increases expected retention. This indicates that employees will be inclined to stay with an organisation that they feel are sensitive to their personal life circumstances. Employees are engaged in organisations where they feel that they are not just a commodity or asset towards achieving organisational goals, but are human beings who form part of families and communities. When employees are not committed to the organisation, it inevitably leads to high staff turnover rates.

- **Quality**

Owusu (1999:107) states that managers have realised the danger of considering employees as a mere extension of production machines or an expendable commodity. Managers have also realised that respecting people, by considering their capability to think and not just to perform physical work is the foundation of any durable improvement of the organisation's performance (including quality performance). Hugo, van Rooyen and Badenhorst (1997:104) defines Total Quality Management as the philosophy that every employee must be imbued with an attitude directed towards a continual striving for improvement. TQM elevates quality to the entire business. It is a way of managing a business to improve overall performance. Job enrichment and task characteristics such as skill variety and autonomy are directly associated with higher work quality and employee satisfaction (Sun, Hui, Tam, and Frick, 2000:350).

The hypotheses tested in this study are outlined in the next section.

HYPOTHESES REGARDING EMPLOYEE ENGAGEMENT

Avery, McKay and Wilson (2007: 1542) is of the opinion that business and research publications have stressed the importance of engagement, but few empirical studies examined how individual and situational factors relate to engagement. Frank, Finnegan and Taylor (2004) concur that many changes are occurring in the workplace of today and that there is an increased awareness of unavoidable demographics which create urgency for organisations to focus more attention on keeping employees actively engaged in their work.

Chalofsky (2009:189) further states that employees need to understand the meaning of work and the workplace and that this multidimensional approach combines the individual and psychological aspects with the contextual and cultural factors that influence employee engagement. Factors impacting on and outcomes of employee engagement appear to well documented (see for example Simpson, 2009:44; Vandenberghe, Bentein, Michon, Chebat, Tremblay and Fils, 2007:1177; Cabrere, Collins and Salgado, 2006:245; Neufeld, Rasmussen, Lopez, Ryder, Magyar-Moe, Ford, Edwards and Bouwkamp, 2006:245; Harter, Schmidt and Hayes, 2002:268), however, often with contradicting findings. Based on the above reasoning, various ANOVA analyses were conducted as to establish the relationships between the dependent and independent variables (see Table 6). The null-hypotheses tested in this research project are:

- H0₁ Perceptions regarding the degree/level of employee engagement do not differ regardless the length of employment in an organisation.
- H0₂ Perceptions regarding the degree/level of employee engagement do not differ regardless the extent of communication in an organisation.
- H0₃ Perceptions regarding the degree/level of employee engagement do not differ regardless the extent of effective leadership behaviour in an organisation.
- H0₄ Perceptions regarding the degree/level of employee engagement do not differ regardless the manner in which recruitment and selection are executed in an organisation.
- H0₅ Perceptions regarding the degree/level of employee engagement do not differ regardless the extent of flexible work-life practices in an organisation.
- H0₆ Perceptions regarding the degree/level of employee engagement do not differ regardless the extent of training and development practices in an organisation.
- H0₇ Perceptions regarding the degree/level of employee engagement do not differ regardless the recognition and reward practices used in an organisation.
- H0₈ Perceptions regarding the degree/level of employee engagement do not differ regardless the productivity levels in an organisation.
- H0₉ Perceptions regarding the degree/level of employee engagement do not differ regardless the concern for safety in an organisation.

- HO₁₀ Perceptions regarding the degree/level of employee engagement do not differ regardless the extent to which employees are retained in an organisation.
- HO₁₁ Perceptions regarding the outcomes of employee engagement do not differ regardless the extent of communication in an organisation.
- HO₁₂ Perceptions regarding the outcomes of employee engagement do not differ regardless the extent of effective leadership behaviour in an organisation.
- HO₁₃ Perceptions regarding the outcomes of employee engagement do not differ regardless the extent of the manner in which recruitment and selection are executed in an organisation.
- HO₁₄ Perceptions regarding the outcomes of employee engagement do not differ regardless the extent of flexible work-life practices in an organisation.
- HO₁₅ Perceptions regarding the outcomes of employee engagement do not differ regardless the extent of training and development practices in an organisation.

The alternative hypotheses (H₁ to H₁₅) can be formulated as the exact opposite of the above null-hypotheses, indicating that there are differences/relationships between the variables. The reason for the inclusion of the above-mentioned hypotheses is that differences only exist between these dependent and independent variables, as indicated above in the formulated null-hypotheses. A thorough ANOVA analysis was conducted and 23 null-hypotheses were originally formulated but only the hypotheses indicating significant relationships between the independent and dependent variables are reported in this paper (also see discussion on ANOVA results). Thus, eight of the formulated hypotheses did not show any relationships and are excluded from this discussion.

The following section provides a discussion of the research methodology followed in this study.

RESEARCH METHODOLOGY

Research approach

The study seeks to understand the perceptions employees have of employee engagement and the impact engagement has on business success. The quantitative approach, through descriptive research, is used in this study to answer questions about the relationships

amongst measured variables with the purpose of explaining, predicting, and controlling a phenomenon (Leedy, 1997:104).

Population and sampling

The population of this study is all the employees being employed at a plant of a local supplier of automotive seat covers. The population size is 267 employees consisting of managers, technical and professional staff, team leaders, technicians and hourly-paid employees. Based on this population a sample size of 120 employees was used. Simple stratified sampling was used to ensure that certain members of the organisation are not over or under represented. The different strata are: hourly paid employees, first line team leaders, technicians, administrative and professional staff and management. The proportion of employees in each strata of the population was determined and the same proportions applied to the sample. Leedy (1997:205) defines randomisation of the probability sample to mean selecting a sample from the whole population in such a way that the characteristics of each unit of the sample approximate the characteristics of the whole sample. Randomisation for this study was achieved by selecting, at random, employee names from the attendance list. The selection was unbiased since team leaders and managers could not select respondents who they favoured for the study. A pilot study was conducted among ten employees which was not included in the sampling frame.

Data collection

Secondary data collection was done by means of text books, journal articles and the Internet. Primary data collection was done by means of a survey using self-administered questionnaires. The questionnaire was distributed in groups to various sections of the organisation based on the stratified sample determined. A short meeting was held with the team leaders and managers of these sections explaining the purpose of the study, how the questionnaire should be completed, and the period for returning the completed questionnaires.

Questionnaire design

The questionnaire consisted of the following four sections:

- Section A consists of six questions gathering the *biographical data* of the respondents. A nominal scale of measurement was used for the following six classification data variables: position occupied, gender, age, length of employment, educational level and department/section employed.

- Section B of the questionnaire measured the *degree/level of engagement* (adapted from Gallup's 12 key elements of measuring employee engagement). An ordinal scale consisting of 12 variables was used by means of a five-point Likert-type scale.
- Section C measured the *factors influencing employee engagement*. An ordinal scale consisting of 24 variables was used by means of a five-point Likert-type scale. The following six factors were identified: communication, leadership behaviour, recruitment and selection, flexible work-life practices, training and development and recognition and rewards.
- Section D investigated the *outcomes of employee engagement*. An ordinal scale consisting of 23 variables was used by means of a five-point Likert-type scale. The following five outcome factors were identified: productivity, safety, customer satisfaction, employee retention and quality.

Data analysis

In order to analyse the data effectively, all questionnaires were identified with a unique number prior to distribution. Every question was coded with a numerical number. Coding enabled the data to be analysed using a Microsoft Excel spreadsheet and the SPSS statistical software package. Descriptive statistics was used to summarise and display quantitative data by means of the mean, mode, median and standard deviation. Other techniques that were used included: frequencies, Cronbach's alpha and analysis of variance.

Ethical considerations

Aspects considered in this project were: objectivity, careful planning of the project during the design stage, proper referencing of quoted sources, avoiding of low-priority probing of sensitive issues and not revealing any confidential information regarding participative cases. The main empirical findings of this study are highlighted in the next section.

EMPIRICAL RESULTS

Descriptive Statistics

Table 3 provides an overview of the most important and significant descriptive statistics for Section B, C and D of the questionnaire (perceptions regarding employee engagement).

TABLE 3

DESCRIPTIVE STATISTICS: PERCEPTIONS REGARDING EMPLOYEE ENGAGEMENT

Factor/Variable	Mean	Standard deviation	Variance

Degree of engagement (B1-B12)	2.66	0.66	0.44
Factors influencing employee engagement – overall (C1-C24):	2.93	0.71	0.50
Communication (C1-C6)	2.75	0.93	0.87
Leadership behaviour (C7-C11)	3.05	1.05	1.10
Recruitment and selection (C12-C15)	2.88	0.69	0.48
Flexible work-life practices (C16-C18)	2.76	0.80	0.67
Training and development (C19-C21)	2.63	0.96	0.92
Recognition and rewards (C22-C24)	3.45	1.11	1.23
Outcomes of employee engagement – overall (D1-D23):	2.34	0.63	0.40
Productivity (D1-D4)	2.60	0.89	0.79
Safety (D5-D9)	2.27	0.74	0.55
Customer satisfaction (D10-D14)	2.07	0.71	0.51
Employee retention (D15-D18)	2.91	0.67	0.44
Quality (D19-D23)	1.98	0.78	0.61

With regard to the descriptive statistics of each individual variable, no in-depth discussion are provided, as it falls beyond the scope of this paper. Only those factors with significant statistics are reported on. Regarding the measure of central tendency (mean values) of these factors, it appears that the overall mean values cluster around point three (neutral) for degree of engagement and factors influencing engagement and point two (agree) for outcomes of engagement. Regarding the factors influencing engagement, training and development (2.63) and communication (2.75) obtained the lowest mean values (agree). Regarding the outcomes of engagement, quality (1.98) and customer satisfaction (2.07) obtained the lowest mean values (agree). It appears that most respondents are indifferent regarding these factors/variables, as indicated by the low overall standard deviation scores. The only individual standard deviation score that obtained relative high scores are recognition and rewards (1.11) and leadership behaviour (1.05).

Demographic Profile of Respondents

Table 4 provides an outline of the most important demographic characteristics of respondents. Ten classification data variables were used in Section A of the questionnaire.

TABLE 4**FREQUENCY DISTRIBUTION RESULTS OF CLASSIFICATION DATA**

Characteristic	Category	%
Position	Hourly paid/production staff	74
	Administrative support/clerical	7
	Salaried technical/professional	6
	Team leader/manager	5
	Other	4
	No response	4
Gender	Male	23
	Female	72
	No response	5
Age	21-30 years	12
	31-40 years	53
	41-50 years	28
	51-60 years	7
Length of employment	Less than 1 year	14
	1-5 years	17
	6-10 years	45
	11-15 years	23
	16-20 years	1
Highest qualification	Matric	77
	Diploma	8
	Bachelors degree	4
	Post graduate degree	3
	Other	5
	No response	3
Department employed	Production	67
	Quality control	14
	Logistics	3
	Maintenance	3
	Finance/accounting	1
	Human resources	3
	IT/Programme development	6

	No response	3
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Table 4 highlights some of the most important demographic characteristics of respondents. An in-depth discussion of these demographic characteristics falls beyond the scope of this paper. It appears that most of the respondents are: hourly paid/production staff; females between 31 and 40 years; employed between six and ten years at the current organisation and only have matric as highest qualification.

Reliability and Validity of the Measuring Instrument

External validity refers to the generalisation of research results to other population groups and is ensured by means of a proper and sound sampling procedure. Clear guidance was given regarding the place, time and conditions in which the research was to be conducted. Internal validity of the instrument's scores is ensured through both face and content validity. Expert judgement and a pilot study were undertaken to assist in this regard. Internal consistency reliability was ensured by means of calculating Cronbach's alpha values. The statistical software package, SPSS, was used to determine the Cronbach's alpha values for the predetermined engagement factors to confirm internal reliability (refer to Table 5).

TABLE 5
CRONBACH'S ALPHA VALUES (SECTIONS B, C AND D OF THE QUESTIONNAIRE)

Variables	Factor	Cronbach's Alpha
B1-B12	Degree of engagement	0.78
C1-C24	Factors influencing engagement (overall):	0.92
	Communication (C1-C6)	0.85
	Leadership behaviour (C7-C11)	0.90
	Recruitment and selection (C12-C15)	0.65
	Flexible work-life practices (C16-C18)	0.38
	Training and development (C19-C21)	0.71
D1-D23	Recognition and rewards (C22-C24)	0.83
	Outcomes of engagement (overall):	0.93
	Productivity (D1-D4)	0.76
	Safety (D5-D9)	0.77
	Customer satisfaction (D10-D14)	0.79

	Employee retention (D15-D18)	0.76
	Quality (D19-D23)	0.87

In analysing the alpha values in Table 5, it appears that all the factors are internally reliable (alpha >0.7), except for flexible work-life practices. Flexible work-life is a new concept in this manufacturing organisation and this could possibly explain the low score for this factor. The respondents might not have understood how they could have flexible working arrangements in a rigid manufacturing operation. According to Hair, Anderson, Tatham and Black (1998:118), Cronbach's alpha value may be decreased to 0.6 in exploratory research, which indicates that all the other factors are internally reliable.

ANOVA

The purpose of this analysis is to investigate the relationship between the independent and dependent variables and to test the stated hypotheses. Inferential statistics are used to make inferences about the population using sample data to make decisions regarding various hypotheses. Different analyses of variance exercises were conducted to test the stated hypotheses.

- *ANOVA 1*: Six classification data variables are used as the independent variables (Section A of the questionnaire) and perceptions regarding the degree/level of engagement (Section B) are used as the dependent variables.
- *ANOVA 2*: Six factors influencing employee engagement are used as independent variables (Section C) and the degree/level of engagement are used as dependent variables (Section B).
- *ANOVA 3*: Five outcomes of employee engagement are used as independent variables (Section D) and the degree/level of employee engagement are used as dependent variables (Section B).
- *ANOVA 4*: Six factors influencing employee engagement are used as independent variables (Section C) and outcomes of engagement are used as dependent variables (Section D).

A total of 23 null-hypotheses were therefore formulated. Table 6 only report those ANOVA results that show significant relationships between the independent and dependent variables and those that exhibit no significant relationships are excluded.

TABLE 6
ANALYSIS OF VARIANCE RESULTS

Dependent variable	Independent variable	F-Test	P-Value	Hypothesis
Degree/level of engagement	Length of employment	4.049	0.004	H0 ₁
Degree/level of engagement	Communication	7.999	0.000	H0 ₂
	Leadership behaviour	11.511	0.000	H0 ₃
	Recruitment and selection	6.218	0.000	H0 ₄
	Flexible work-life practices	5.294	0.001	H0 ₅
	Training and development	13.603	0.000	H0 ₆
	Recognition and rewards	9.452	0.000	H0 ₇
Degree/level of engagement	Productivity	7.467	0.000	H0 ₈
	Safety	6.339	0.000	H0 ₉
	Employee retention	7.622	0.000	H0 ₁₀
Outcomes of engagement	Communication	7.160	0.000	H0 ₁₁
	Leadership behaviour	6.457	0.000	H0 ₁₂
	Recruitment and selection	7.824	0.000	H0 ₁₃
	Flexible work-life practices	6.567	0.000	H0 ₁₄
	Training and development	11.001	0.000	H0 ₁₅

The ANOVA results clearly indicate the relationships between the independent and dependent variables. Hypothesis₁ to Hypothesis₁₅ can, in all cases, be rejected and the alternative hypotheses can be accepted. Hypothesis₁ falls within the rejection region ($p < 0.05$) which indicates that there is a significant relationship (difference) between the degree/level of employee engagement and length of employment in an organisation (H₁ accepted). No other demographical variables indicated any relationships with the degree/level of engagement. H0₂ to H0₇ can also be rejected (high F-statistic values and P-values are > 0.05). This indicates that there are significant relationships between the degree/level of employee engagement and factors influencing employee engagement (H₂ to H₇ accepted). Hypotheses₈ to Hypotheses₁₀ also falls within the rejection region (P-values > 0.01), indicating highly significant relationships between the degree/level of engagement and the following outcomes of engagement: productivity, safety and employee retention (no relationship with customer satisfaction and quality). The research hypotheses, H₈ to H₁₀, are therefore accepted. H0₁₁ to H0₁₅ are also rejected, based on the F-statistic values and all P-values > 0.01 . This indicates that there are highly significant relationships between the

outcomes of employee engagement and all factors influencing employee engagement (H₁₁ to H₁₅ accepted).

The main conclusions and recommendations of this study are presented in the next section.

CONCLUSIONS AND RECOMMENDATIONS

Although there are a number of different definitions for employee engagement, the degree of loyal commitment and the discretionary effort employees exert emerged as common themes. Various factors and attributes influence engagement and these factors can vary from one organisation to the next. The most common factors that could influence employee engagement are communication, leadership behaviours, human resource-related policies and procedures and recognition and rewards. The literature reviewed indicated that there is strong link between employee engagement and business success. A strong relationship exists between the degree of employee engagement and business success. Organisations are in business to create value for all stakeholders. An objective of business is to maximise the return on investment. Understanding that there is a relationship between employee engagement and business success provides justification that organisations should strive to increase the degree of employee engagement in order to increase stakeholder value and maximise the return on investment.

By improving the degree of employee engagement, organisations can significantly increase productivity and reduce the cost of poor quality. Engaging employees reduces the number of safety-related incidents at work. Engagement therefore increases business success by reducing absenteeism caused by lost-time injuries. Engaged employees have a heightened awareness of customer needs, and strives to increase customer satisfaction levels. The relationship between employee engagement and business success suggests that employees' attitude towards their quality of work will improve as their degree of engagement increases. Increasing the degree of engagement bolsters the employees' loyal commitment and improves employee retention

The following conclusions and recommendations can be drawn, based on the analysis of variance tests conducted:

- It appears that there is a significant relationship between the perceptions regarding the degree/level of employee engagement in an organisation and the length of employment of respondents (H₀₁ rejected). Employees with longer tenure have different perceptions regarding the degree/level of engagement as compared to

employees with shorter tenure. It thus appears that the longer employees are employed in an organisation the more they feel engaged. Newly appointed employees should therefore receive proper induction and orientation as to facilitate employee engagement from the start of employment. No other relationships were found with the other demographical variables used in this study.

- Highly significant relationships were found between the degree/level of employee engagement and the following factors influencing employee engagement: communication; leadership behaviour; recruitment and selection; flexible work-life practices; training and development and recognition and rewards (H_{0_2} to H_{0_7} rejected). Organisations should ensure that these factors and practices are used effectively as to ensure higher levels of employee engagement. Managers should keep communication channels open which send a message that the employee matters, thus aligning them to organisational goals. Leaders should be inspiring and visionary – employees feel engaged when their work is considered important and meaningful. The recruitment policy of an organisation should convey certain messages that influence future employees' engagement and commitment. Organisations should be committed to helping its employees to pursue their careers and concurrently feel fulfilled in their personal lives. Organisations should ensure that employees understand their purpose and mission in the organisation which will enhance their eagerness to find ways to accelerate their development and constantly seek information about their training and development progress. Employees should receive rewards and recognition from the organisation which will make them feel obliged to respond with higher levels of engagement.
- It appears that there are highly significant relationships between the degree/level of employee engagement and the following outcomes of engagement: productivity; safety and employee retention (H_{0_8} to $H_{0_{10}}$ rejected). No relationships were found with customer satisfaction and quality. Organisations should realise that by creating an engaged workforce it implies getting barriers out of the way so that employees can be more effective and productive. Engaged employees should understand how their safety actions influences the overall success of the business and would therefore be less inclined to behave in a manner that may jeopardise his/her own and colleagues' safety. Employees will be inclined to stay with an organisation that they feel are sensitive to their career aspirations and personal life circumstances (not just a commodity or asset towards achieving organisational goals). When employees are not committed to the organisation, it inevitably leads to high staff turnover rates. Organisations should further realise that an engaged employee concentrates on giving the customer a reason to return, thus building customer loyalty over time.

Organisations should provide enriching jobs to employees allowing skill variety and autonomy which are directly associated with higher work quality and employee satisfaction.

- Highly significant relationships were found between the outcomes of employee engagement and the factors influencing engagement (H0₁₁ to H0₁₅ rejected). By communicating effectively; portraying caring leadership behaviour; recruiting and selecting employees that are positive and committed; allowing for flexible work-life practices and providing suitable training and development opportunities, organisations could ensure positive outcomes of employee engagement (increased productivity, customer satisfaction, employee retention, quality and safe work practices).

Table 7 outlines general guidelines that can be followed to improve employee engagement.

TABLE 7
GENERAL GUIDELINES FOR EMPLOYEE ENGAGEMENT

	Degree of engagement
1	Organisations should ensure that all employees know what is expected of them.
2	The necessary materials and equipment should be provided to ensure tasks can be performed effectively.
3	Employees should be provided the opportunity to do what they do best every day.
4	Organisations should ensure that employees doing good work receive recognition or praise at least every six months.
5	Leaders should care about employees as a person.
6	Leaders should actively encourage employees' training and development.
7	Organisations should ensure that they consider employees' suggestions and opinions for improving the organisation.
8	Communicating the organisation's mission and purpose should make the employees feel that their job is important.
9	Organisations should ensure that all employees are committed to doing quality work.
10	Organisations should cultivate the idea of friendships amongst employees in the workplace.
11	Organisations should regularly discuss performance/progress with all employees.
12	Employees should be afforded regular opportunities to learn and grow at work.
	Factors influencing employee engagement
1	Management should regularly communicate to all employees to help them understand

	what the purpose and value of an organisation is and where they fit into.
2	Team leaders/managers should take care about aspects of employees' personal life and futures careers as to demonstrate their importance to the organisation.
3	Organisations should use proper and unbiased recruitment and selection techniques when appointing employees.
4	Organisations should be sensitive to striking a balance between employees' work- and personal life and allow, if possible, for flexibility in work schedules.
5	Organisations should ensure that employees learnt something new at work on a regular basis by providing training and development opportunities.
6	Organisations should reward productive employees fairly based on knowledge and skills.
	Outcomes of employee engagement
1	Team leader/managers should help to remove obstacles impacting on productivity by having regularly discussions with employees.
2	Organisations should provide a safe and healthy working environment by taking care of safety regulations and providing regular safety training to all employees.
3	Organisations should ensure that customer problems are dealt with promptly and effectively and realise that customer satisfaction is important for organisational success.
4	Organisations should take appropriate measures to retain skilled employees and this should be a priority of all managers.
5	Organisations should continuously strive to improve the quality of its products and services. which should be reflected in the daily decisions of management.

The following quote seems to be appropriate to conclude this paper with:

“Employee engagement has emerged as one of the most vital concepts underlying workforce motivation and productivity ... heightened personal connection to the organisation ... fit between skills and the job and cultures and policies.” (Guban, 2004)

LIMITATIONS OF STUDY

The following aspects could be regarded as some limitations of this study:

- The sample was restricted to only one manufacturing concern in the Nelson Mandela Metropole which could have impacted on the representativeness of manufacturing concerns in the area.

- The majority of respondents were hourly paid employees with only a matric as highest level of education. These employees might have different perceptions regarding employee engagement as compared to top management with higher education levels.

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THE PERSONAL FINANCIAL KNOWLEDGE, ATTITUDES AND GENERATION Y CHARACTERISTICS OF NMMU STUDENTS

ABSTRACT

This study investigates the personal financial knowledge and attitudes and Generation Y characteristics of students at the Nelson Mandela Metropolitan University. Empirical data was collected by means of a questionnaire among 180 students. The main findings of this study indicated that the respondents were fairly knowledgeable with regard to a few of the basic concepts in personal finance and less knowledgeable regarding the majority of concepts relating to risk management, investing in financial resources and planning for the future. Definite gaps in their knowledge provide an explanation for the unfavourable personal financial attitudes exhibited. The results showed that the respondents only exhibits a few characteristics of the Generation Y student and triangulation of financial attitudes confrimed this. To bridge the gap that exists in student's financial knowledge and promote more positive personal financial attitudes, universities and schools are encouraged to educate the youth by equipping them with sound financial knowledge and habits.

INTRODUCTION

The global economic crisis is having far reaching effects on developed as well as on emerging markets. Many countries are reporting zero, or even negative economic growth, which is causing them to experience a recession. South Africa is classified as an emerging market and thus does not have the resources to follow the United States' solution of bail-out plans in order to save the economy from a recession (Wilson 2009).

According to Cameron (2008), the biggest fear associated with the global economic crisis, is the potential of key businesses, such as banks, to fail, which in turn could cause other businesses to fail, as the debt defaults of one business affects other businesses. This will result in a considerable increase in unemployment, which will mean that even more businesses will go bankrupt, as the demand for goods will decrease, due to a decrease in consumer's disposable income. It is thus important to get people to save more money.

Getting the public to save more begins with educating the youth, and numerous initiatives have been undertaken to meet this need. One initiative is 'Teach Children to Save South Africa' (TCTS SA), which was piloted in 2008 by the South African Savings Institute and The Banking Association of South Africa. Supported by the Department of Education and numerous financial institutions, this initiative targets students in grades four to seven and

aims to increase their financial literacy. The initiative also aims to instill a culture of saving into these youth; where, how and why to save (O'Donnell 2008).

Another factor triggering insufficient savings among South Africans is escalating personal debt. The first poll in South Africa for 2009 (Justmoney 2009) evaluated user's debt situation to determine if they are managing their current levels of debt effectively. The results are as follows:

- 16% are debt free;
- 40% are in debt, but it is under control;
- 11% have missed a repayment; and
- 33% are drowning in debt

The Department of Education has acknowledged the need to increase the financial literacy of South Africans, and have thus included financial subjects into the curriculum for scholars, as school-based education reaches a large number of scholars from an early age (FinMark Trust 2004:20). The Finscope Study (2003) indicates that this is not sufficient to equip the youth with sound financial knowledge and habits.

The new generation of students (referred to as Generation Y), are techno-savvy, entrepreneurial, ambitious and have a desire for immediate gratification. This generation, however, lacks the ability to manage their finances effectively, and needs to be educated on the importance and value of budgeting and saving for the future (CBA 2006). The financial instability of these students is fuelled by, amongst other factors, an increase in debt, as well as an increase in tertiary education costs, which many students fund through student loans (Marsh 2006).

According to Swart (2003:117), 94% of South Africans will not be financially independent when they retire. They will either need to continue working, or will rely on family and friends in order to survive. This is another factor which reinforces the need for the youth of South Africa to develop the necessary financial skills, to ensure that they are able to retire with financial independence.

This research focused on students and their knowledge and attitudes toward the management of their personal finances and whether they exhibit the characteristics of Generation Y students. The outcome of the study may identify some of the challenges that students face in managing their finances in terms of their attitude and knowledge. Once their

attitudes towards financial management and their knowledge thereon have been investigated, appropriate conclusions and recommendations can be made.

PROBLEM INVESTIGATED

For many students, moving into tertiary education presents an opportunity to assert independence. This freedom can be exciting, but for many students it can be problematic when it comes to the mistakes that they make when managing their money, mistakes which can leave them with large amounts of debt (Robinson 2006).

Moving away from home presents many financial challenges for students. Rogers (2007), notes that students often live above their means, do not pay their bills on time and spend every cent of what they earn or of what they receive from student loans. These mistakes prohibit any saving and contribute to the accumulation of major debt.

When students move away from home, they also encounter many other students from diverse financial backgrounds. This could cause them to face financial peer pressure, as the need to fit in becomes a strong influence on their behaviour. Students may try to keep up with those who are in a completely different financial league. This pressure might cause students to constantly feel the need to upgrade their cars, wardrobes and entertainment choices in order to match theirs. This is another financial mistake that students make, as it causes many to spend and live well above their means (Duguay 2001).

Managing money effectively is a skill that is learnt at home. The way parents handle their finances has a significant impact on the way their children will one day manage their finances (Norton 2008). According to Marquit (2009), an individual's upbringing can also affect their personal financial attitudes. The manner in which parents view money could influence the value which their children place on it. Therefore, it is imperative that parents educate their children about personal financial management; the value of money and the importance of saving.

A poll by Justmoney (2009) indicated that the majority of South Africans are not managing their debt effectively. This affects an individuals' ability to manage their finances effectively, as the bulk of their income goes to paying the interest on this debt, leaving very little or even no money left over to save for retirement. Cameron (2008) suggests that greater emphasis needs to be placed on educating the next generation in terms of personal finance and debt management, to ensure that they do not follow in their parent's footsteps of financial mistakes and excessive debt.

The question can thus be asked what is the level of personal financial knowledge of students and what personal financial attitudes do they display. In addition, which characteristics of the new generation student do they display?

RESEARCH OBJECTIVES

Primary objectives

The primary objective of this study is to investigate the personal financial knowledge and attitudes of students at the NMMU as well as their Generation Y characteristics.

Secondary objectives

The following secondary objectives are identified in order to achieve the primary objective:

- (a) to conduct a literature review which will assist to identify the various concepts associated with personal financial management; the new generation of students and their financial situation, and to describe the various components of the personal financial management framework.
- (b) to modify an already existing questionnaire using scientific procedures.
- (c) to conduct an empirical survey on the personal financial knowledge, attitudes and Generation Y characteristics of students at the NMMU.
- (d) to summarize, draw conclusions and provide recommendations based on the empirical results.

Given the stated objectives of the research, a number of questions need to be addressed:

- Who is the new generation student and do NMMU students exhibit these characteristics?
- What is the personal financial knowledge of the students?
- What are the personal financial attitudes of the students?
- What is the relationship between the independent demographic variables, such as the: students' age, gender, marital status and level of education, etc. and his/her personal financial management knowledge and attitudes?

LITERATURE REVIEW

Definition of personal financial management and financial literacy

Personal financial management is defined in various ways by a number of authors: Swart (2003:18) defines personal financial management as a process that involves a variety of different financial planning areas. Amongst others, these include career planning, income tax

planning, estate and investment planning. As noted by Botha, du Plessis, du Preez, Geach, Goodall, Nel, Rossini, & van der Linde (2008:6), personal financial management is a process which consists of the collection and analysis of an individual's personal and financial data for the purpose of setting financial goals for the future. A long-term action plan is then developed that will enable the individual to manage his/her income, assets and liabilities, and achieve the preset goals. Therefore it is clear that personal financial management involves the planning of various components of an individual's financial life. For this reason, setting goals and planning are critical elements to successfully planning one's finances.

FinMark Trust (2004:1) defines financial literacy as "the ability to make informed decisions and take appropriate actions on matters affecting one's financial wealth and well-being. It is a multi-dimensional concept which requires both breadth and depth of knowledge." South Africans face many challenges, one being a lack of financial literacy. Among the unbanked sector of the sample, 61% were found to be partly financially illiterate, whereas the partially banked registered as 59%, and the fully banked as 45% (FinMark Trust 2004:1).

The importance of personal financial management in terms of knowledge and attitudes

Swart (2003:18) considers that knowledge of financial matters is essential to ensure the effective management of an individual's personal finances. Struwig and Plaatjies (2007:21) also identifies that personal financial knowledge is a key element to overcoming the financial challenges which South Africans face, and further states that it is an essential requirement for the improvement of one's financial situation and standard of living. According to Pankow (2003), positive financial attitudes are another critical element in personal financial management. A positive attitude towards personal finances encourages an individual to take control and to implement the necessary steps to meet their personal goals and to improve their current financial situation.

The importance of personal financial management for students stems from the fact that students face financial challenges that are specific to them. Swart (2003:60-61), states that these challenges include those costs associated with student loans and the availability of transport or the cost of public transport, amongst others. "Research reveals that only 4% of South Africans retire in comfort, 12% simply get by, 33% have to reduce their lifestyle dramatically, and 51% retire in circumstances that force them to supplement their income, or rely on family members for financial support" (Hirsch 2005). Therefore students have to make an effort to manage their finances effectively to deal with these challenges and to save for the future, in order to ensure their financial independence at retirement.

Previous research on personal financial management and the youth

Marsh (2006) examined the personal finance attitudes, behaviors and knowledge levels of first-year and senior students at Baptist universities in the state of Texas. The main finding of this study was that in order for students to be successful in the future it is necessary for them to be more willing to take responsibility for, and control of, the management of their personal finances.

Els (2008) focused on financial knowledge of students at the NMMU and found that the respondents were knowledgeable regarding the basic concepts of personal finance, but were less knowledgeable regarding matters relating to the management of personal finances. Thus, this study addresses a definite gap between the financial knowledge and attitudes of students at the NMMU. It further also investigates the Generation Y characteristics of the students.

The personal financial management framework used in this study

Personal financial management includes many topics, such as budgeting, cash management, borrowing, retirement and estate planning etc. (Garman & Fogue 2003:4). Various frameworks encompassing these topics also exist, although many incorporate similar aspects of these personal financial management areas.

The proposed personal financial management framework by Struwig and Plaaitjies (2007) was initially developed to test the personal financial knowledge of individuals. In order to develop this framework Struwig and Plaaitjies (2007) investigated the personal financial framework and components thereof of numerous authors; consulted with various industry experts; and evaluated relevant literature sources. As this framework incorporates all of the elements of personal finances that an average South African citizen should be aware of, it were found to be the most appropriate for the purpose of this study. This framework includes the following components: Component 1: The basic concepts in personal finances; Component 2: Management of personal finances; Component 3: Risk management; Component 4: Investing in financial resources; Component 5: Planning for the future, and Component 6: Miscellaneous.

The Generation Y student

McCrindle (2002:3) argues that the new generation of students (referred to as Generation Y), includes those people born between 1977 and 1994. This generation has grown up in a

changing world; the boom of technology and globalization has had a significant impact. Peers, television and the media have also influenced this generation.

These students have been raised in an era of remarkable technological innovations, economic and socio-cultural changes. These external events shape individuals' personality (Schiffman & Kanuk, 2004) and account for differences in values, beliefs, attitudes, and preferences that exist between age cohorts (Schewe & Noble, 2000). Most (one in four) of Generation Y students are raised in single-parent/income homes (Noble, Haytko & Phillips, 2009).

Unlike the previous generations, Generation Y students have been raised in a consumption-driven society. They have more access to credit cards, credit, shopping channels, cable/digital TV, mobile phones and the Internet (Bakwell & Mitchell, 2003). Amidst these privileges, most Generation Y students are at the stage of uncertainty, face challenges of defining who they are (Piacentini & Mailer, 2004; Noble *et al.*, 2009) and of coping in their era of rising single-parent and single-income families (Rindfleisch, Burroughs & Dentton, 1997). Generation Y students love shopping especially for apparel items and conspicuously spend cash and can be regarded as compulsive spenders (Norum, 2008).

Characteristics of Generation Y

Generation Y are one of the largest generations to date, and comprise independent and ethnically diverse individuals. NAS Insights (2006) identifies characteristics which set this generation apart from others. Firstly, regarding finances, many of Generation Y's have a credit card co-signed by a parent. Secondly, the majority of this generation has mothers who work and many were or are being raised in single-parent homes. Thirdly, the greater part of this generation has computers in their homes, and half of them have access to the internet from these computers. Fourthly, with reference to interaction, this generation is greatly influenced by their peers, and although they are experts with technological communication, they prefer interacting with others on a personal level. Lastly, this generation appears to always be in a hurry, and constantly in need of more time.

NAS Insights (2006) concluded that there are negative and positive aspects that these characteristics present for Generation Y.

“Negative characteristics of Generation Y:

- Impatient- Raised in a world dominated by technology and instant gratification.

- Skeptical- In recent years there has been more scamming, cheating, lying and exploiting than ever from the major figures in the media.
- Blunt and expressive- Self-expression is favoured over self-control. Making their point is most important.
- They are image-driven- Making personal statements with their image is very important.

Positive characteristics of Generation Y:

- Adaptability- Generation Y is used to adapting and being comfortable in various situations.
- Technologically savvy- Growing up in the age of technology and taking advantage of it.
- Ability to grasp new concepts- This is a learning-oriented generation.
- Efficient multi-taskers- They will do it faster and better than their competition.
- Tolerant- Generation Y will make the increasingly diverse workforce feel at home and comfortable.”

In addition, Kane (2007) notes that Generation Y are also very team-oriented and achievement-oriented. This generation is confident and ambitious, and values teamwork, in terms of input and affirmation by others. Furthermore, this generation craves attention in the form of guidance, and would therefore benefit greatly from a mentor who could give them direction in their lives and careers. The characteristics described above relate to the Western culture. It is not the intention of this study to compare Generation Y characteristics of different cultures.

RESEARCH METHODOLOGY

The purpose of the study is to investigate the personal financial knowledge and attitudes of students at the NMMU and the Generation Y characteristics they display. Given the nature of this research, the use of the quantitative approach will allow the use of statistical measures and techniques to analyse the data. An exploratory research design was followed.

The sample of this study

Only students at the NMMU South Campus were included in the study. These students were also required to be either part of the Faculty of Business and Economic Sciences or part of the Faculty of Science. These two faculties were chosen, as it is expected that business students have been exposed to finance and financial information throughout their studies;

whereas it is assumed that science students have more of a mathematical and scientific background. For the purpose of this research, it was deemed most appropriate to make use of a non-probability sampling method, and in particular, to employ convenience sampling. Therefore, the most conveniently available students from each of the respective faculties were chosen to form part of the sample.

Approximately 180 questionnaires were distributed to the sample, of which 155 were suitable for analysis. The questionnaire was distributed with a cover letter printed on the Unit of Applied Management Sciences letterhead.

The measuring instrument

A questionnaire that was administered to the sample was based on the framework developed by Struwig and Plaatjes (2007). To test the questionnaire, a pilot study was conducted which included five students from different academic backgrounds. The pilot study included students from a business and economic background, as well as from a scientific background. The aim of the pilot study was to test the students' understanding of the questions and the ease with which they complete the questionnaire.

The questionnaire consisted of three main sections: These are:

- Section A: Biographical details and characteristics of Generation Y students
- Section B: Personal financial knowledge
- Section C: Personal financial attitudes and some financial attitudes to triangulate the characteristics of the Generation Y student.

Reliability and validity of the measuring instrument

The internal consistency of the test scores was statistically calculated. As noted by Babin, Hair, Money & Samouel (2003:172) there are two methods that a researcher can make use of in order to test the internal reliability of test scores, namely the split-half reliability method, and Cronbach's coefficient alpha. Struwig and Stead (2001:133) further adds the Kuder-Richardson formula 20 (K-R 20) as an additional method that can be used to measure internal consistency reliability. For the purpose of this study, the researcher made use of Cronbach's coefficient alpha, as it is most useful when used to determine the internal consistency reliability of test scores which are in a Likert-type format (Struwig & Stead 2001:133).

With regard to validity of the measuring instrument, it contains elements of theoretical knowledge regarding the various elements of personal financial management. This contributed to the content validity of the questionnaire. In order to further ensure the content validity of the questionnaire, an expert was asked to judge the appropriateness of the questions contained in the questionnaire.

Ethical considerations

The research topic dealt with personal finances, and as this is a very personal matter, not all individuals are willing to disclose this information. The purpose of this research is, however, to investigate the knowledge and attitudes of students as a whole, not on an individual basis. Therefore, the respondents were not asked to indicate their names or student numbers, which guaranteed their anonymity. Furthermore, the cover letter printed on the Unit of Applied Management Sciences letterhead, which accompanied the questionnaire, assured the respondents that the information gathered will remain confidential and will not be distributed to third parties, but be used for research purposes only.

Data collection

Questionnaires were distributed to students in the Faculty of Business and Economic Sciences by one of the researchers, whereas a fieldworker, a Masters student from the Faculty of Science, distributed questionnaires to students from this faculty. A number of lecture venues in which the questionnaires was administered to the students, were secured and students attending the respective lectures, completed the questionnaires.

RESULTS

Summary of the results of the biographical section and Generation Y characteristics

A relatively balanced response from males (44%) and females (56%) was obtained. These results may indicate that a fairly balanced proportion of male and female students are present in each class. Of the respondents, 81% were between the ages of 21 and 26. With regard to the course of study that the respondents enrolled for, 40% respondents were enrolled for a Science course of study, 49% for Commerce and 11% for an Administration degree. Furthermore, 63% of the respondents had a commercial subject as part of their course of study, and 37% did not. The majority of the respondents, 95, indicated that they rely on income from their parents/guardian as a source of income, while 51 respondents indicated that they have a part time job. Four respondents indicated that they have a full time job, which means that they are studying part time.

When the respondents were asked to indicate whether or not they have a retail store account, a valid will, a credit card, or any insurance policies, the results were fairly one-sided. The majority of the respondents did not have the mentioned items. Approximately 67% of the respondents did not have a retail store account, 92% did not have a valid will, 63% did not have a credit card, and 72% did not have any insurance policies. These results are expected when considering the age distribution of the sample. In addition, at this age, individuals have very few assets that need insurance protection and a limited need to transfer assets to chosen beneficiaries through a valid will.

The majority (63%) of the respondents indicated that they have access to the Internet from where they live. Only three respondents indicated that they do not own a cell phone. Out of the remaining 151 respondents, 37% of these respondents make use of a contract cell phone, and 63% make use of a prepaid cell phone, which gives the individual more control over one's spending.

When the respondents were asked who they were raised by, the majority (80%) indicated that they were raised by both parents, 14% were raised in a single parent home, 3% by grandparents, and 3% by other individuals. Additionally, when asked whether the respondent's mother worked during this period, the majority (65%) indicated that their mother did work, 27% of the respondent's mothers did not work, and the remaining 5% either did not know, or did not live with their mother when they were growing up.

These results indicate that the respondents do reflect a few characteristics of Generation Y, but the majority of the responses indicate otherwise. The reason for this could be due to the fact that the students sampled in this study comprised mainly of third-year under-graduate and post-graduate students, with 81% of the respondents being between the ages of 21 and 26. The reason as to why they show some similar characteristics could be due to the fact that they have grown up in the transitional period from Generation X to Generation Y, but would require further investigation.

Summary of the results of the personal financial knowledge of students

It was shown that respondents were fairly knowledgeable with regard to only some of the basic concepts in personal finance, relating to the definitions of inflation and overdrafts. The respondents were, however, less knowledgeable or uncertain regarding the majority of the basic concepts of personal finance, including critical elements relating to an individual's net worth and the effects of inflation.

With regard to the respondent's knowledge of the management of personal finances, the respondents indicated that they were relatively confident in this regard. However, the respondents might have been overconfident, as the results indicated that the respondents showed little knowledge with regard to budgeting and personal taxes.

The results of the risk management component showed that the respondents were less knowledgeable or uncertain of all of the aspects in this regard. The respondents indicated a significant lack of knowledge in both the insurance and assurance sections.

The respondents' knowledge regarding the investment in financial resources revealed that they were knowledgeable with regard to savings and investments, but were unaware of the concept of compound interest and were less knowledgeable with regard to the relationship between risk and return.

The results relating to the planning for the future component indicated that the respondents are relatively uncertain and lack knowledge relating to all aspects of planning for their financial future.

With regard to the miscellaneous component, on average, the respondents indicated that they were less knowledgeable or uncertain of the majority of these matters. The respondents were found to be lacking knowledge particularly with regard to consumer rights, the definition of an ante nuptial contract and with whom to lodge short-term insurance complaints. With regard to the costs associated with modern communication, the respondents indicated that they were very knowledgeable of the fact that a call made from a cell phone to a landline is indeed more expensive than a call made from one landline to another.

Overall student knowledge relating to the management of personal finances is weak. This is evident as the students were only considered knowledgeable regarding 15 out of the 49 items tested in this section.

Summary of the results of the personal financial attitudes of students

It was shown that respondents' attitude towards the basic concepts of personal finance was seen to be weak to average, specifically with regard to the importance of a financial plan and with regard to whether the respondent would only accept a job that pays well. Furthermore, with regard to the respondents' attitude toward the sufficiency of their pocket money or earnings, the respondents indicated a weak attitude.

Under the component relating to the management of personal finances, the respondents' attitudes were seen to be average with regard to their use of credit cards to meet their wants and with regard to paying an account in a lump sum rather than in instalments. The respondents' attitudes with regard to budgeting and saving were seen as good, however their attitude toward their level of savings was seen as weak. Only a small percentage of the respondents worry about the amount of money that they owe others, which is reflected by the weak attitudinal response to this item.

With regard to the risk management component, attitudes toward the importance of a medical aid were seen to be strong. Furthermore, with regard to the component relating to the investment in financial resources, the respondents' attitudes were seen as average, as a relatively large number of the respondents realized that earning a high income does not mean that you are wealthy.

Under the planning for the future component, respondents' attitudes towards the need for retirement planning were good, but their attitude toward their provision for retirement was weak.

In the miscellaneous section, the respondents' attitude toward the availability of financial assistance tools over the Internet was average. In addition, the respondents also indicated an average attitude toward whether they enjoy being a student, and also as to the importance of money. The respondents showed good attitudes towards the importance of being aware of what is happening in financial markets, as well as to gambling being a waste of money.

The overall student attitudes relating to the management of personal finances is average to weak. This is evident as the students were only considered to have good attitudes towards 6 out of the 26 items tested in this section.

The results of the empirical research from Section C of the questionnaire showed weak attitudes towards the items relating to the characteristics of Generation Y. Firstly, the respondents showed a weak attitude towards the importance of having the latest technological gadgets, and showed only an average attitudinal response when asked whether they care what their friends think about them. In addition, the respondents indicated a weak attitude toward dressing up the way their friend do, and toward the importance of wearing clothes with "labels". This was in agreement with the characteristics of Generation Y student responses established in Section A.

Summary of the results of more advanced statistics

Both the personal financial knowledge and attitudes section have a Cronbach alpha coefficient which is close to 0.70. Therefore, the questionnaire was found to be acceptable in terms of reliability which allowed the researcher to perform a more advanced statistical analysis. The researcher performed a one-way ANOVA to determine if relationships existed among the independent variables from Section A of the questionnaire, and the personal financial knowledge and attitudes of the respondents. Table 1 provides a summary of the results.

TABLE 1: RELATIONSHIP OF INDEPENDENT VARIABLES AND PERSONAL FINANCIAL KNOWLEDGE AND ATTITUDES OF RESPONDENTS

Independent variable	Knowledge		Attitudes	
	P. Value	Statistical significant difference	P. Value	Statistical significant difference
A1: Gender	0.02	Yes*	0.06	No
A2: Age	0.62	No	0.44	No
A3 Marital status	0.82	No	0.49	No
A4: Course of study	0.00	Yes*	0.02	Yes*
A5: Residence	0.01	Yes*	0.41	No
A7: Commercial subjects included in course	0.00	Yes*	0.13	No
A9: Credit card status	0.01	Yes*	0.46	No
A10: Internet access	0.03	Yes*	0.91	No
A12: Ownership of assets	0.36	No	0.52	No
A13: Ownership of insurance policies	0.38	No	0.83	No
A14: Ownership of will	0.95	No	0.47	No
A15: Retail store account	0.11	No	0.88	No
A16: Ownership of cell phone	0.04	Yes*	0.61	No
A17: Traveling status	0.13	No	0.40	No
A18: Social network registration	0.62	No	0.58	No
A19: Savings account	0.95	No	0.10	No
A20: Investment accounts	0.05	Yes*	0.02	Yes*

* $p < 0.05$ indicates statistical significance

The results of the one-way ANOVA indicated in Table 1 indicated that there are a number of independent variables that had a relationship with the way the respondents answered certain items in the personal financial knowledge section of the questionnaire. The independent variables that were found to have a statistically significant difference included the gender of the respondents, the respondent's course of study, their residence while attending university, and whether or not commercial subjects were included in their course of study. In addition, credit card status, Internet access, ownership of a cell phone, and investment accounts were all variables which appear to show a statistically significant difference.

With regard to the response of the personal financial management attitudes section, the results of the one-way ANOVA in Table 1, indicate that there are only two independent variables which had a relationship with the way in which the respondents answered certain items in this section of the questionnaire. The independent variables that were found to have a statistically significant difference included the respondent's course of study and whether or not the respondent has an investment account.

CONCLUSION AND RECOMMENDATIONS

The personal financial management knowledge of the respondents indicated that they were fairly knowledgeable with regard to a few of the basic concepts in personal finance. The respondents were less knowledgeable or uncertain regarding the majority of the components included in the Personal Financial Management framework namely, concepts relating to risk management, investing in financial resources and planning for the future.

The gaps which exist in the personal financial knowledge of the respondents could provide an explanation for the doubtful attitudes noted in the personal financial attitudes section. As an example, the respondents are not aware of the principles of effective budgeting, and are therefore not satisfied with their level of savings.

To fill these knowledge gaps, schools in particular could include personal financial management into the curriculum as a compulsory subject which could be taken by pupils from Grade 10 through to Grade 12. This subject should be focused on equipping pupils with the knowledge surrounding basic concepts of personal financial management, as well as to highlight the importance of savings and the methods of saving and investing. The subject should not only be theory-based, but should also include a practical side as well, such as getting the pupils to draw up their own budget etc. This will not only equip them with the necessary financial knowledge, but will also give them the ability and the confidence to really incorporate sound financial practices and positive financial attitudes into their life.

Furthermore, only 63% of the respondents indicated that they had a commercial subject as part of their study. Therefore, it can be suggested that all courses offered at University should incorporate some form of education in personal financial management. This is necessary, as every individual, regardless of their occupational choice, will have to work with money. This could provide them with the basic financial knowledge necessary to prepare them to manage their income and expenses effectively.

Doubtful and weak financial attitudes were shown to be present in the respondents' responses. Negative financial attitudes discourage individuals from taking control of their financial situation and often lead them to the point where they merely accept their current financial situation and do nothing to improve their circumstances (Marquit 2009). However, positive attitudes toward money and wealth cause an individual to be proactive with regard to their finances, and constantly set goals and develop plans to achieve these goals. Therefore, an effort should be made by all Schools and Universities to educate the youth and to improve the general personal financial attitudes of the public, by showing how a positive financial attitude can result in the financial success of an individual.

The majority of the respondent students indicated that they did not own a credit card or a retail store account. The majority of the respondents indicated that they have access to Internet and almost all indicated that they own a cellphone. Most of the respondents grew up with both parents and most of their mothers also worked. The results showed that the respondents only exhibits a few characteristics of the Generation Y student and triangulation of financial attitudes confrimed this. These results are important to educators who need to adopt teaching strategies in line with student needs.

The main limitation to the study relates to the sample selection. The sample consisted only of students from the NMMU and every member of the population did not have an equal opportunity of being selected as the researcher made use of convenience sampling, and not random sampling. This causes difficulties when generalizing the results from the sample to the population. Considering the exploratory nature of the study, there are many aspects that have not been investigated and that may warrant research in the future. These are:

- A study which analyses the personal financial knowledge and attitudes of high-school pupils.
- An investigation into younger students in order to investigate whether they show characteristics of Generation Y.

- An investigation into the reasons as to why these students do not show the characteristics of Generation Y.
- A comparative study between younger and older students, to determine how these students differ, and which generation characteristics they exhibit.

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AN INVESTIGATION INTO RACISM AMONGST STUDENTS AT A SOUTH AFRICAN UNIVERSITY

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Key words: Stereotypes, race relations, diversity management

ABSTRACT

The study investigated racism amongst students at a South African University. The students who participated had a mean age of 22.19 years (SD=3.103 years). The history of racism in South Africa was briefly described to contextualize the stereotypes and discourses that are found in the contemporary context. This study was deemed relevant due to the increasing reports of racist attacks and xenophobia at tertiary institutions and in the workplace in South Africa (Barton, 2003). The study assumptions were that racism exists amongst students at the university; male students are less positive toward other race groups and that female students will be more positive toward other race groups. Questionnaires adopted from Durrheim (2007) were utilised for data collection as they seek to identify stereotypes that students have about other ethnic groups. Discourse analysis was used to unpack the underlying discourses from the qualitative responses given by participants. These discourses were related to the prevailing paradigm at the time which was more patriarchal

and oppressive. Data from the quantitative questions was analysed using descriptive statistics and independent T test to make inferences. The findings indicate that racism does exist amongst students at this University and research has shown how stereotypical behaviour is translated to subtle racism in the workplace (McPherson, 2008).

INTRODUCTION

It has been fourteen years into democracy and South Africa is still facing a problem of racism and stereotypical behaviour (Fischer, 2002). Durrheim, Quayle, Whitehead and Kriel (2005) state that in the post-apartheid and democratic South Africa Whiteness ironically continues to be privileged in spite of legislation to redress racial discrimination. The continuation of racism over the years can be attributed to the argument by Wilson (1996) that the ideology of racial discrimination is congruent with the historical world views that some men are born to rule and others are born to work (or serve their superiors).

There have been numerous constructs put forward in an attempt to justify racial discrimination. It is important to understand that racism is a modern concept (Briscoe, 2001). Discrimination by colonials in past centuries was not perceived, at the time as racism, but when viewed in terms of contemporary thinking it is evident that the bigotry and prejudice reported in history is compatible with what is termed racist discourse today. Essentially, colonialists sought to educate indigenous populations into their ways of doing and thinking. History gives numerous examples of violence and discrimination of marginalised human groups, but it is only in the modern era that the violence underpinned by legislation (for instance, Nazi Germany and South Africa).

There are various forms of discrimination and racism, based on for instance differences in culture and religion. These forms, constructs, definitions and historical narratives can all be defined as discourses of racism. Roger and Bowman (2004) and Fredrickson (2002) identified two broad categories for the justification of racism. The first justification was based on religion which was predominant in the 16th and 17th Century where the antagonistic relationship between Jews and Christians was rife. Olaleye (2003) and Barton (2003) argue that religion was used from the 15th, 16th and 17th centuries as a means of discriminating against so-called Native populations. The Christians viewed all other religious groups as inferior in particular Jews and Muslims. The drive for uniformity and homogeneity of thinking illustrated by this historical example, stimulated resistance to cultural differences and provided fertile soil for ethnic intolerance through successive centuries. These constructs were operationalised into racist ideology in the Second World War when millions of Jews,

Eastern Europeans and Gypsies were slaughtered in what is now termed ethnic cleansing. Ethnic cleansing and racist constructs still persist on many continents and are still found in Africa for example the Hutu's and Tutsi's in Rwanda.

The construct of un-pure (impure) races was replaced by the theory of evolution related to social science and pseudo-science. This became the second justification in the 19th century for racist ideology. During the 19th century Darwinism was conceptualized and later operationalised in what became the worst scenario of racist ideology and practice in the history of mankind (Bergman, 1993). The reasoning behind Darwinism is that some races were inferior (such as Blacks) to others. According to Barta (2005) Darwin was fascinated by human intervention in nature and was also attracted to the potential of eugenics. This fascination resulted in him founding the theory of evolution. Although Darwin opposed slavery, he concluded that the strongest evidence of evolution was the existence of living primitive races which were an evolutionarily building block between the civilized races and large primates.

Towards the end of this century, the slave trade and colonisation were prominent, culminating in the subjugation of some ethnic groups because they were perceived as primitive. This led to the construct of racism as we know it in contemporary society. Constructs are schools of thought developed in an attempt to understand specific thing. For instance, the theory of evolution is a construct which seeks to understand the origins of humankind as is the construct of Christianity.

Hendricks (2002) asserts that the history of South Africa is closely bound up with colonialism, racial segregation and apartheid. Apartheid ultimately resulted in Black-on-Black discrimination (not only White on Black discrimination), namely tribalism and xenophobia which has been fuelled by the prevailing paradigm of patriarchy. This assumption has been supported in the findings of Slabbert (2001) who notes that there are significant indications of racial stereotypes in all ethnic groups. South Africans have a strong positive bias towards their own group and a negative bias towards other cultural groups (Barton, 2003).

Problem investigated

Racism is seen as a major problem in South Africa (Fischer, 2002). Pillay and Collings (2004) mention that racism facets such as tribalism, xenophobia, discrimination, hostility, and rejection of minority groups. In previous decades in South Africa this has been reversed and racism was perceived as only being towards the Black majority. However, black on black xenophobia is growing in South Africa and it appears that racism in South Africa is still

prevalent (Shindondola, 2002 & April, 2008). This study was deemed relevant to the student society as they are a microcosm of the broad South African society. The researcher considered it pertinent and appropriate to investigate racism in light of the recent xenophobia in South Africa. Increased studies and research conducted on racism and xenophobia may shed light on the root cause of the problem.

Research Hypothesis

The main aim of the study is to assess if racism exists amongst students at a South African University. The study assumptions, underpinned by relevant literature, were:

- Racism exists amongst students at the University
- Male students will be less tolerant of other ethnic groups
- Female students will be more tolerant of other ethnic groups.

LITERATURE REVIEW

Racism defined

Anthias and Yuval-Davis (1996) and Rogers and Bowman (2004) assert that racism is dependent on the different biological origins of people from diverse ethnic groups focusing on cultural differences. The concept of race was created as a means of classifying human beings with the sole purpose of giving power to White people and to legitimize the dominance of White people over non-White people. Modern forms of racism concentrate more on cultural than on biological differences (Durrheim, Dixon, 2001). However, institutionalised racism when discriminatory laws are part of a country's legal system occurred during the Apartheid era in South Africa. This type of racism is usually predicated on biological difference.

Wilson (1996) states that racism is a modern historical phenomenon which is grounded in exploitative and oppressive economic arrangements where one group dominates another for material gain. In Africa, an example of this is the partition and colonization of Africa by European powers. Racist practice thus contributed to the growth of Western culture and resulted in genocide against people who were perceived to be different. It is further argued that the notion that people of colour were a different species and inferior to the colonials enabled the colonials to justify their oppressive behaviour(s).

Aversive Racism is a theory proposed by Frederickson (2002) based on the concept that evaluations of racial and ethnic difference are characterised by dissonance between for instance, one group's values and their sub-conscious or unacknowledged negative attitudes toward different racial or ethnic groups. Symbolic racism, on the other hand, means a belief

that out-groups have problems that they brought on themselves. For instance, Blacks were poor during the Apartheid era in South Africa because they lack ambition and effort. The in group does not acknowledge that poverty could, in part, be related to discriminatory practices and institutionalised racism by the in or dominant White group or the era.

Today, implicit or subtle racism tends to be acknowledged as the most common form of modern racism. Examples of subtle racism could be the glass ceiling effect, the so-called managerial and/or salary differences between equivalently qualified females and their male counterparts, or positive stereotypical remarks such as Blacks are good at athletics athletes and Indians are good at science (April, 2008).

Other forms of racism include tribalism which entails a label that distinguishes broad population bands from one and other it is embedded in cultural differences such as language (Banks, 1996). An example of tribalism in South Africa is that of the ongoing conflict, which erupts periodically, between the Zulu and Xhosa nations (who speak different languages). Shindondola (2002) defines xenophobia as discrimination towards foreigners or strangers. This is manifested in individuals who could be for instance, the same colour as the local inhabitants. In South Africa local Black inhabitants may blame foreign Black individuals who are in the country (either legally or illegally) for taking their jobs. This could result in discriminatory practice(s) that leads to violence and aggression toward foreigners. Shindondola (2002) further states that foreign nationals are often called names such as *makwerekwere* which is a derogatory term for foreign individuals who do not understand any of the languages of the country.

Stereotypes

According to Devine in Devine and Elliot (1995) a stereotype is a well-learned set of opinions or associations that link a set of characteristics with a group label and are reinforced through the socialization of an individual in society determining how the individual relates to people of the stereotyped group. April (2008) further argues that stereotypes have specific discourses which shape an individual's perception of the stereotyped groups, meaning that the individual will see stereotypic characteristics even when they are not present. A stereotype, therefore, associates a certain characteristics with a particular group, an example would be Blacks generically being referred to as lazy workers and Whites generically labelled as energetic workers. A stereotype is thus a well-learned set of associations linking a set of characteristics with labels to specific groups.

When trying to understand motivators of stereotypical behaviour personal attitudes and beliefs are usually underpinned by cultural prejudice. Fundamentally, like-minded people are more likely to express stereotypical beliefs and attitudes when they are together. The following is a list of common stereotypical associations which presents Whites in a more positive light than Blacks.

List 1: Stereotypical Oppositions

Positive – White (European background)	versus Black (African Background)
• Western	versus Non Western
• Modern	versus Traditional (Old Fashioned)
• First World	versus Third World
• Private property	versus Communal property
• Nation	versus Tribe
• Advanced	versus Backwards (Primitive)
• Developed	versus Underdeveloped
• Inventive	versus Imitative
• Progressive	versus Stagnant
• Mature(Adult)	versus Immature (Child)
• Open (in attitude, honest) untrustworthy)	versus Cold (in attitude, therefore untrustworthy)
• Christian	versus Superstitious (ancestral belief)
• Moral	versus Immoral
• Self controlled	versus Impulsive (undisciplined)
• Educated	versus Uneducated
• Clean	versus Dirty
• Law abiding	versus Criminal
• Civilised	versus Uncivilised
• Rich	versus Poor

Types of racism

Pillay and Colley (2004) discuss two broad categories of racism which underpin most dimensions of racism, namely old-fashioned racism and modern or subtle racism. Old-fashioned racism involves a straightforward rejection of, and hostility towards, a minority group. According to Virtanen and Huddy (1998) the new form of racism, namely modern or more subtle racism, has taken over the political role formerly played by old-fashioned racism. This new form of prejudice is more likely to surface as resentment over what the majority see

as special treatment of a minority group who are perceived as undeserving. Farley (2009) states that there are four elements of racism which are common to discriminatory and racist practice.

1. Ideological racism or racist ideology – this is a belief system where one group believes it is superior to another group. It believes it is superior because of one, a mixture of or all of the following:
 - Biological – the inherent belief that a group is superior because it is biologically engineered to be so;
 - Intellectual – the inherent belief that a group is superior because it has better cognitive powers or is more intelligent than other groups;
 - Culturally – the inherent belief that a group is superior because it has social processes and cultural norms in place that are somehow better than other groups.
2. Attitudinal racism or racial prejudice – this is about the negative perceptions or attitudes and beliefs that members of one race group hold about another group. These perceptions, attitudes and beliefs are based on faulty knowledge and information.
3. Behavioural racism or racial discrimination – this refers to specific actions and behaviours that are discriminatory or biased and are used by one group against another racial or ethnic group.
4. Institutional racism or institutional discrimination – this refers to any laws, policies or practices that are part of a constitution or put into the laws of the land which are biased, racist or discriminatory against any group in any way.

A brief history of contemporary racism in the global context

Lewis (1998) describes religion as being one of the origins of racism in the Western world. Specific emphasis is made of Judaism, Catholicism and Muslim beliefs. It is noted that, historically, people of these faiths had no difficulty in accepting enslaved persons to work in their employment. Davis (2001) argues that slavery produced racism, in the sense that the negative stereotypes that were applied to slaves were ultimately transferred to most people of Black African descent.

According to Fredrickson (2002) the climax of the history of racism occurred in the twentieth century in the rise and fall of overtly racist regimes. Europe is often one of the first places people think of when racism is discussed. From institutionalised racism, especially in colonial

times, when racial beliefs — even Eugenics — were not considered wrong, to recent times where the effects of Nazism is still felt. Europe is complex with many cultures in a relatively small area of land which has seen many conflicts throughout history. Most of these conflicts have had trade and resource access at their core, but national identities have often exacerbated these conflicts. An example of this would be the Holocaust in Germany when Adolf Hitler's Nazi party persecuted people whom they perceived to be biologically impure. According to Weitz (2002) the Nuremberg Laws of 1935 codified German citizenship as a product of German blood. These laws outlawed sexual intercourse between the so-called pure blooded Aryan Germans and German Jews, Gypsies and homosexuals. In the Nazi model, as in the Eugenic one, procreation was the locus of racial protection and purity. These laws affected Germans and foreigners alike. In fact, the list of racial threats expanded with the German Third Reich: Polish, Czechoslovakians and Slavic people were perceived as racial threats to Germany. Hitler wanted a pure Aryan race and was willing to purge all non-pure groups through what we now call the Holocaust. Socialists, Communists, homosexuals, and Jehovah's Witnesses all came to represent biological threats to the pure Aryan. Most importantly, the Nazis proved that race and racism were not merely products of the irrational, intemperate mind, but also dependent on a mind-set defined by respect for law and a rigidly organized view of the world. This type of thinking led to Apartheid in South Africa in the second half of the twentieth century.

Racism has also been used to justify exploitation using pseudo-science. Debates over the origins of racism often suffer from a lack of clarity. Some pundits conflate recent forms of racism with earlier forms of ethnic and national conflict. In most cases ethno-nationalist conflict leads to disagreement over land and strategic resources. In some cases ethnicity and nationalism were underpinned by wars between great religious empires (for example, the Muslim Turks and the Catholic Austro-Hungarians). Ethnic identity and nationalism became sources of conflict within such empires with the rise of print-capitalism. Essentially, the press always promotes specific views which are always grounded in the social context, business and politics of the day specific to the country of origin. This promotes ethnic identities and nationalism which can be defined as a collective emphasis on specific ideals which can either be negative or positive (Briscoe, 2001; Banks 1996; Barton, 2003).

Lewis (1998) puts forward a view of the origin of racism in a global context. He asserts that racial antagonism represents a return to an earlier and more primitive conception of identity and difference. Language and culture, religion and allegiance can be changed for the individual by personal choice and for the group, by gradual assimilation. Race does not fit into this, that is, it cannot change. Hostility to those of other races is endemic in human

societies, stronger in the more disadvantaged and weaker in the more advantaged. However, there has been an increase in what is referred to as modern racism. This consists of institutionalised and rationally structured hostility, discrimination and persecution of weaker ethnic groups. This increase has been prevalent in advantaged rather than disadvantaged societies.

A brief history of early racism in the South African context

According to Maylam (2001) race is one of the themes which has shaped South African history. The history of South Africa is, in the large part, one of increasing racial divisiveness. Today it can also be seen as the story of a journey through obstacles towards the creation, from diversity, of a single nation whose dream of unity and common purpose is now capable of realization. The Hunter-Gatherer San and the Bantu speaking peoples were the earliest inhabitants of South Africa. These are the peoples who came into contact with the early European settlers between 1488 and 1652 (Van Aswegen, 1993). Discrimination was already rife between the San and the Bantu speakers. This discriminative behaviour was more of a tribal nature as the San felt that their resources were going to be depleted by the other groups and wanted to maintain ownership or control over the land which they believed was theirs.

From as early as the 17th century the relationships between the local inhabitants and that of the Europeans was established and showed a gradual degeneration from good mutual understanding and co-operation to conflict. From these early beginnings there was ongoing conflict between the European settlers and the indigenous peoples through the following centuries. The settlers however, made use of the Black population as slaves. In this sense, discrimination and racist practice was upheld by the Europeans.

Smuts' role in the history of South African discrimination was his concept of segregation. According to Alexander (2006), Smuts established and supported a racially segregated society in South Africa, which promoted White supremacy. While he thought it was the duty of Whites to deal justly with Africans and to civilise them, he did not think they should be given political power. Giving the right to vote to Black Africans, he feared, would lead to the ultimate destruction of Western civilization in South Africa. In 1929 he justified the establishment of an education system that had separate institutions for Blacks and Whites. In general, Smuts' view of Africans was patronising, he saw them as immature human beings that needed the guidance of Whites. This attitude reflected the common patriarchal perceptions of the global context in his life time.

Examples of racism in Africa

South Africa was not the only African country affected by colonisation. There are numerous African countries which were colonised. Racist and discriminatory behaviour(s) have been exhibited by almost all countries that were under colonial rule. The most important aspect of many of this behaviour is that discrimination and racism was directed at people of the same colour but of different ethnic groups. It can be argued that during the Boer war Afrikaner speaking and English speaking South Africans perpetuated these type of behaviours which led to stereotypical thinking about the Boers (Farmers - Afrikaans speakers) and Rooineks (Red necks – English speakers) which resulted in White on White discrimination and racism. In some cases, for instance, Zimbabwe, Whites were targeted and called oppressors. However, after obtaining independence from colonial rule most, if not all African countries moved from White-on Black racism to Black-on-Black racism in forms commonly known as tribalism or xenophobia. In Botswana there have recorded instances of racist attacks where the government discriminated against the San (Bushman). The government enforced its policy of forced relocation of the San by using armed force and threats of violence or death. This is similar to occurrences under Apartheid where whole communities (Black, Coloured and Indian/Asian) were forced to move. This action was justified by a member of government stating that there cannot be uncivilized communities continuing to exist in the age of computers (Sunday Times, 2005). This type of thinking and speaking perpetuates stereotypes.

In Congo there was Black-on-White racism which was subsequently followed by an extreme form of Black-on-Black racism where the ethnic group then known as Pygmies, who were believed to be the first inhabitants of the vast rainforests of Central Africa, were hunted down and eaten during the Congo Civil War. The local inhabitants believed that the Pygmies were subhuman and claimed that their flesh could confer magical powers. This act of extreme racism is now referred to as a form of genocide (UNESCO, 2001). There was ethnic cleansing in Uganda under Idi Amin's rule which may be likened to that in Nazi Germany. Amin spread racist propaganda against Indians /Asians. This involved promoting stereotypical images of Indians/Asians (Fredrickson, 2002). Amin used propaganda to justify a campaign of de-Indianisation, eventually resulting in the expulsion and ethnic cleansing of forty eight thousand of Uganda's Indian/Asian minority. According to Wieviorka (1995) Amin stated that he asked Britain to take responsibility for all the Indians/Asians in Uganda. To further secure his regime Amin launched a campaign of persecution against ethnic groups

different to his. In this period between one hundred thousand (100, 000) and five hundred thousand (500, 000) people were killed.

Studies conducted on students in South African universities on racial attitudes and the results have shown a high prevalence of racist behaviour amongst students. Some of the findings indicated that males were less tolerant of other racial groups and were likely to make racist comments compared to females. Other conclusions that gleaned from the studies was that White students rated higher on measures of old fashioned racism (Louw-Potgieter ,1989; Slabbert, 2001; Dixon, Durrheim & Tredoux, 2001; Shindondola, 2002; Groenewald, 2004; Pillay & Collings ,2004).

Racism in the workplace in the workplace – global context

Subtle racism seems to be more prevalent in the workplace especially amongst minority groups (Lamont and Stallworth, 2005; Gooden, 2008; Deitch, Barsky, Chan, Brief, Burkenroad, & Bradley, 2005). Ethnic minorities experience workplace bullying as an everyday experience. This bullying was in some cases reported to be overt but was much more likely to be implicit or subtle racism. Studies also found that different types of bullying were perpetrated on individuals depending on their ethnicity. In addition to demonstrating the occurrence of subtle discrimination, evidence was presented which indicated that the experience of everyday discrimination is negatively associated with various indicators of well-being. This adds to the employee having more time off sick which leads to a related negative economic problem for the employer. Fundamentally, more people off work sick equals less productivity which means a drop in turnover.

RESEARCH METHODOLOGY

Participants and setting. A sample of four hundred (400) students, five percent (5%) of all registered students, at the University was drawn. Probability sampling was used for this study as every student had an equal opportunity of participating in the investigation (Terre Blanche, Durrheim and Painter, 2006). Only three hundred (300) of these were returned and twelve of these (12) could not be used as the respondents did not fill in the questionnaires. The final sample was two hundred and eighty-eight (288), which is three point two five percent (3.25 %) of the total student population. The mean age of the students was 22.19 years (SD=3.103 years).

Instrument. Data was collected by means of distributing four different questionnaires. The survey questionnaires were based on one pioneered by MacCrone (1932) and updated by Pettigrew (1960) and tailored by Durrheim (2007).

Procedure. The questionnaire(s) were distributed by e-mail to the potential respondents' e-mail address. The respondents had to return the completed questionnaire to a sealed box.

Data analysis. Qualitative data was analysed using a technique called Discourse analysis. This is a social constructionist technique where the language used by individuals is used to examine their constructs of the world and what they have either gained or lost from these constructions (TerreBlanche et al, 2004 and Lyons & Coyle, 2007). The quantitative data collected was analysed using both parametric and non-parametric statistics. In non-parametric statistics Descriptive statistics was used to give a clear representation using graphical representations in the form of histograms. For the parametric analysis independent T-tests were used to establish group differences between males and females (Kerr, Hall, & Kozub, 2004).

RESULTS AND DISCUSSION

General demographical information

Females make up sixty-two percent (62%) of the respondents in the study and males make up thirty-eight percent (38 %). The dominant age demographic was the age group between seventeen to twenty-four years (17-24) with eighty-five percent (85 %) of the respondents falling within this age group. Twelve percent (12 %) of the respondents fell in the age group of between twenty-five and thirty years (25- 30) and only three percent (3%) were thirty-one years (31) and above. Ninety-five Percent (95 %) of the respondents were Black. This is indicative of the race demographics of the students at the university and the surrounding community. Only three percent (3%) of the respondents were White, one percent (1%) Indian and less than one percent (1%) were Coloured. One student reported that they were Albino in the other category. The respondent evidently did not understand that being an Albino is not a racial group but a genetic predisposition or this could indicate that the student feels this way possibly from the way in which he or she has been treated by other students. Table 1 below presents the above information in tabular form.

Table 1-General demographical information

Gender	n	%
Male	108	38
Female	180	62
Total	288	100

Age

Age (years)	n	%
17-24	244	85
25-30	34	12
>31	10	3
Total	288	100

Race	n	%
Black	273	95
White	9	3
Indian/Asian	3	1
Coloured	2	1
Other	1	0.3
Total	288	100

Racial Intolerance.

Independent T tests were conducted and only statistically significant differences were reported on in the data analysis. Generally the male respondents from this university are more stereotypical, hence racist, as compared to their female counterparts. Table 2 below gives a full summary of the T-test results which are discussed below.

Female coming into contact with Blacks as close friends- Female respondents had a higher mean score when investigating the nature of their contact with Blacks as close friends ($t=2.44$, $p=0.016$). Considering that the population is predominantly Black, it is quite probable that the male respondents might have misinterpreted the word “close friends” and ascribed a more intimate meaning to the phrase.

Perception of Blacks as people from a different group- Females perceive Blacks to be of a different group from their own ($t=2.55$, $p=0.011$) as they have a higher mean score. Considering where the study was conducted it is possible that there is emphasis more on gender difference due to the prevailing tribal patriarchal norms. Essentially the Zulu culture puts more emphasis on males being the head of the home and having the power to have the final say. Women are expected to be subservient to the males (Rudwick, 2008). This is

congruent with the fact that the majority of students at this university are from rural backgrounds; hence this mentality will manifest itself in how female students identify with male students.

Feeling negative towards Blacks- T-test results for suggest that males are more negative towards Blacks than their female counterparts ($t=-2.10$, $p= 0.037$)

Contact with Blacks and feeling cold towards them- Females have a higher mean score compared to males ($t=-2.74$, $p=0.007$). When in contact with Blacks females are warmer and since males are colder suggesting confirming that males are more stereotypical than females.

Contact with Blacks and feelings of hostility- Male respondents have a lower mean score suggesting that they are more hostile towards Blacks as compared to females ($t=-2.981$, $p=0.003$).

Contact with Blacks and feel suspicious of them- Males had a lower mean score indicating that they are more suspicious of Blacks as compared to females who seem to be more trusting of Blacks ($t=-2.819$, $p=0.005$).

Contact with Blacks and have feelings of respect towards them- Males have feelings of disrespect when in contact with Blacks, whereas females have feelings of respect when in contact with Blacks ($t=-3.132$, $p=0.002$)

Contact with Coloureds and feel cold towards them- Males have a lower mean score indicating that they are cold when they come in contact with Coloureds, as compared to females who had a higher mean score ($t=-2.127$, $p=0.038$).

The students had varying views in terms of their relation with people from other cultural groups and amongst their own racial groups as well. This is worthy of further investigation. A comprehensive study in a more diverse institution would be beneficial to assess whether the stereotypical behaviour noted amongst the students in this particular university is noted in other institutions.

Table 2-Summary of T-Test results on racial intolerance

	N	Mean	SD	T	p
Blacks as close friends					
Male	107	4.449	1.092	2.44	0.016
Female	176	4.733	0.652		
Blacks as people from different group					
Male	106	2.783	1.561	2.55	0.011

Female	173	2.312	1.457		
Feeling negative towards Blacks					
Male	108	7.685	2.730	-2.10	0.037
Female	180	8.339	2.240		
Contact with Blacks and feeling cold towards them					
Male	108	7.130	2.752	-2.74	0.007
Female	180	7.994	2.317		
Contact with Blacks and feelings of hostility					
Male	108	7.231	2.736	-2.981	0.003
Female	179	8.162	2.244		
Contact with Blacks and feel suspicious of them					
Male	108	6.407	3.136	-2.819	0.005
Female	179	7.436	2.744		
Contact with Blacks and have feelings of respect towards them					
Male	108	7.130	3.085	-3.132	0.002
Female	180	8.233	2.548		
Contact with Coloureds and feel cold towards them					
Male	108	5.278	2.449	-2.127	0.038
Female	180	5.933	2.665		

Stereotypes unpacked from Qualitative data

Stereotypes used to describe City Blacks: The stereotypes noted by respondents of city Blacks is that they have no *culture*, *think they are better than others and are rich*. The respondents further elaborated on the stereotype of having no culture by indicating that city blacks have adopted a western way of living and have moved away from the Black cultural way of doing things.

Stereotypes used to describe Rural Blacks: The majority of students at the university are from a rural background hence it would be expected that respondents were describing themselves or their socioeconomic environments when answering this question.

The common traits that the respondents noted included that rural Blacks are *very respectful; are poor; are very cultural and believe in ancestry and are not educated.*

Stereotypes used to describe English Whites: Common traits noted to describe English Whites is that they are *accommodating of others, are friendly and that they think they are superior and like being in-charge.*

Stereotypes used to describe Afrikaner Whites: The common descriptions about this group of people were based on the apartheid context. The traits perceived of Afrikaner Whites are that they are *racist, aggressive/ violent and that they are hard-working.* Most of the brutality was inflicted during the apartheid era under the rule of the Nationalist Party, hence the description that they are racist and violent. Some of the statements noted by some of the respondents were “aggressive devils who compare Blacks with monkeys” and another respondent wrote that they would “kill an Afrikaner that will try to disturb me in my way”. These are very strong statements which are indicative of the negative attitude that the respondents have toward Afrikaner Whites.

Stereotypes used to describe Blacks: This question here required the respondents to give a general opinion on how they would describe Blacks and not specific to either a city black or rural Black. The title Black and not being specific whether it is rural or city Black brings to light a different picture. Blacks were described as *cultural and believe in ancestry; are respectful; are sociable and friendly; and are loud/ talkative.* The stereotypes highlighted by the respondents are more descriptive of rural Blacks. This may be attributed to the fact that nearly the majority of the respondents come from rural areas. They think from their own context, which is what Devine (1995) asserts that stereotypes are contextual and only come out when individuals are talking about a particular topic.

Stereotypes used to describe Whites: As with Blacks, generalised comments have been made to describe Whites, of which some were used to describe White Afrikaners. The traits are that *Whites are racist, are superior/ and like being in power; they are wealthy and that they are good pretenders.* The trait that they are racist as discussed before may be attributed to the context of the apartheid era. The respondents further substantiated their responses by indicating that through superiority and wanting to be in power may be characteristic of more the English Whites as identified by the respondents in the earlier question. The wealth of Whites is attributed to the fact that they own farms and have big mansions as they were able to set themselves up during the apartheid era. The aspect of being good pretenders also became apparent when the respondents had to state their views on how they felt was the solution to the race relations problem in South Africa. One of the main reasons was that Whites and Indians/Asians pretend to like people from other races hence the race relations problem in South Africa will never end.

Stereotypes used to describe Indians/Asians: The stereotypes used to describe Indians/Asians are that they *do not socialise and isolate themselves, are unethical/deceitful; are business minded and they are racist*. Reasons were not given to justify why they are perceived as unethical. Indians/Asians are business minded and this was commented on by the respondents. There was not much said about Indians/Asians as they are not that many on the campus and since they do not socialise with the Black students it may be assumed that the traits mentioned are generalised traits that the respondents have about Indians/Asians.

Stereotypes used to describe Coloureds: The main stereotypes that came up about Coloureds are that they are *violent/ aggressive; they do not have a culture/ they have an identity crisis, and that they like alcohol, drugs and fast cars*. The respondents felt that Coloureds are violent/ aggressive and stated that they fight a lot. This behaviour was related to the trait of violence. The respondents, because of their background, are very much rooted in culture. They brought up the issue of culture and expressed their view that they think Coloureds have no culture. Culture is very important to the respondents and they stated on their responses that sometimes Coloureds think they are White and sometimes they think they are Black.

CONCLUSION

The quantitative and qualitative results underpin the assumption that racism exists amongst students at this particular University. The stereotypical observations made by the respondents in describing how they feel about for instance, Afrikaner Whites indicate that there are feelings of racial tension towards this group. This is also seen in the respondents feeling towards the group Whites generally. However, when the White group is split into Whites – English the responses at first appear positive. However, further analysis reveals that the oppositions used by respondents are consistent with a racist discourse associated with power and patriarchy. Some of the responses indicate Black on Black racism which is also associated with xenophobia.

There is little distinction generally in terms of significant difference, of how Black females and Black males relate to other racial groups delineated in the study. It appears that males are not less positive and females not more positive in general. In only eight (8) questions was significant difference found indicating that females are less positive toward Blacks than males in specific instances. The inference is that this may be due to the patriarchal nature of African society generally as the majority of female respondents are Black females. As the university can be considered the workplace of students it is likely that these findings will be

mirrored by the broader work place. This assumption is underpinned by the outbreak of xenophobic violence in South Africa during 2008.

IMPLICATIONS FOR MANAGERS/RECOMMENDATIONS

Race relations, stereotypical attitude and discriminatory behaviour are still a problem in South Africa, more specifically to people of Colour and physically challenged employees. McPherson (2008) highlights the importance of establishing a culture where individuals take responsibility for challenging racial and sexual stereotypes and also discriminatory practices towards disabled people. The paper concluded that if staff felt that they were being treated fairly and were valued by the organisation it was unlikely that bullying, harassment and discrimination would take place. Managers need to become sensitive to people's needs by upgrading their leadership skills by gaining an insight into how their behaviour affects the people they manage.

Ethnic minorities experience workplace bullying as an everyday experience. This bullying was in some cases reported to be overt but was much more likely to be implicit or subtle racism. Studies also found that different types of bullying were perpetrated on individuals depending on their ethnicity. In addition to demonstrating the occurrence of subtle discrimination, evidence was presented which indicated that the experience of everyday discrimination is negatively associated with various indicators of well-being. This adds to the employee having more time off sick which leads to a related negative economic problem for the employer. Fundamentally, more people off work sick equals less productivity which means a drop in turnover. Top management need to consult OD practitioners to assist in identifying racism, barriers that are still in place, and the ways in which they are maintained in an attempt to create a more effective, productive, and healthy organization. Racism is deeply rooted in our culture and therefore in our organizations. By taking note of group patterns, assumptions, and biases that may be at play managers can come up with interventions to create a more humane workplace for all.

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EXPLORING WOMEN ENTREPRENEURSHIP IN SOUTHERN AFRICA

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ABSTRACT

The important role that entrepreneurship plays to combat unemployment should not be underestimated, especially in regions with growing unemployment rates such as Southern Africa. Women entrepreneurs can contribute significantly to economic development in South Africa. In the Southern African context, it is challenging for both men and women to start a business, but women face unique challenges in starting and growing a business. The objective of this study was to investigate women entrepreneurship in the Gauteng province and Lesotho and to make practical recommendations to enhance women entrepreneurship in Southern Africa. A survey that included 170 women-owned businesses was conducted. Women entrepreneurs in this study were mostly motivated by a need for independence, self-fulfilment, work flexibility and a need for a challenge. They are currently facing obstacles such as obtaining finances, work-home conflict, lack of education and training in business and management skills. Financial support, business training and advice, the need to network with other business owners and marketing support were indicated as their main support needs.

INTRODUCTION

The important role that small businesses and entrepreneurship play in stimulating economic activity, creating jobs, alleviating poverty and uplifting living standards, has been recognised internationally as well as in South Africa (Van Vuuren and Groenewald, 2007: 269).

Southern Africa is a developing region with high unemployment rates, low levels of formal and higher education, the migration of individuals from rural areas to cities, corporate restructuring and government policies, and regulations that enforce the restructuring of larger organisations. The region thus has an urgent need for entrepreneurs in the small, micro- and medium enterprises (SMMEs) that can act as a tool to combat unemployment and crime and to stimulate the economy as a whole (Maas and Herrington, 2006: 59). Lesotho, also, is no exception.

The last half-century has witnessed monumental changes for women as income earners (Smith-Hunter, 2006: 1). Women entrepreneurs can thus contribute significantly to economic development in Southern Africa. They are not only contributing to employment creation, but they also contribute to the diversity of entrepreneurship in the economic process (Verheul, Van Stel and Thurik, 2004: 3).

Although women represent more than 50% of the South African adult population (Bureau of Statistics, 2005: 10), they own only about 33% of existing businesses (O'Neill and Viljoen,

2001: 38). Furthermore, according to Maas and Herrington (2006: 38), only 41% of the adult women in South Africa are part of the active working population. The TEA index (Total Early-Stage Entrepreneurial Activity index) measured the percentage of women entrepreneurs between the ages of 18 and 64, involved in starting a business, at only 4.83% for South Africa. This is below the average of 7.72% as calculated for all countries (Maas and Herrington, 2006: 44).

The contribution of women entrepreneurship to economic development and wealth creation in Southern Africa has not been adequately studied and developed. The focus of this study was micro-, very small, small and medium-sized women-owned businesses. The South African National Small Business Act (1996) and National Small Business Amendment Act (2004: 2) classify micro-, very small, small and medium-sized businesses as businesses that employ less than 200 full-time equivalents of paid employees.

PROBLEM STATEMENT

Jalbert (2000: 10) emphasised that, in the past, economic growth has been steady in nations where women have advanced, where, by contrast, economies have been stagnant in countries where women have been restricted. In the Southern African context, it can be challenging for both men and women entrepreneurs to start a business, but women face certain unique challenges and barriers to start and grow a business.

The profile, difficulties and needs of the woman entrepreneur in Southern Africa should be fully explored and understood before effective support systems can be implemented. Research on women-owned businesses in South Africa is limited. It was only over the past few years, that more scientific-based research on women entrepreneurs was done in various geographic areas in South Africa (refer to studies done by Meyer, 2009; Kock, 2008; Lebakeng, 2008; Botha, 2006, among others). This study field still requires a lot of exploration to understand the needs of women entrepreneurs in order to support the contribution of these women to the South African economy.

The geographical area Gauteng is a densely populated industrial area with a high potential for entrepreneurship. Lesotho, on the other hand, is a typical rural area with a lack of infrastructure and business enabling processes. This study will aim to gather information that can be applied in the development of women entrepreneurship in both these areas.

OBJECTIVES OF THIS STUDY

The objectives of this study are divided into primary and secondary objectives.

Primary objective

The primary objective of this study is to investigate women entrepreneurship in Southern Africa and to make practical recommendations to enhance women entrepreneurship in the region.

Secondary objectives

In order to achieve the primary objective, the following secondary objectives were formulated:

- To gain insight into women entrepreneurship by means of a literature study.
- To determine what motivates women to start their own businesses.
- To determine the unique challenges women face in managing their businesses.
- To determine the needs of women entrepreneurs in Gauteng and Lesotho with regard to support, training and development.
- To compare the dynamics of women entrepreneurship between a typical urban (Gauteng) and rural (Lesotho) area.
- To suggest practical recommendations to enhance women entrepreneurship in Southern Africa.

LITERATURE REVIEW

Women entrepreneurs in this study are defined as female owner-managers of small to medium-sized businesses (National Small Business Act, 1996; National Small Business Amendment Act, 2004: 2).

Factors that motivate women to start their businesses

As recommended by Botha (2006: 293) in previous research, it is important to determine the factors that motivate women to start their own businesses. This knowledge regarding the profile of the woman entrepreneur might enable policy-makers to create an encouraging environment for women entrepreneurs to start their own businesses.

Heilman and Chen (2003: 360) argued that various push-and-pull factors exist that can motivate women to start their own businesses. Maas and Herrington (2006: 19) defined push factors as the more negative factors, such as unemployment and retrenchment, which force

people to become entrepreneurial in order to survive. They regard pull factors to be the more positive factors, such as government support and role models, which might influence people to choose entrepreneurship as a career option. Ghosh and Cheruvalah (2007: 149) found that only one-fifth of women are drawn into entrepreneurship by pull factors. The rest are forced into entrepreneurship by push factors.

Orhan (1999: 2) and Hughes (2006: 109) found that independence and self-accomplishment are usually ranked first and second with regard to reasons why women start their own businesses. Buttner and Moore (1997: 42) stated that women entrepreneurs who left their organisations because they pursued a challenge, measured success primarily in terms of self-fulfilment, and secondarily, in terms of profit. According to Jalbert (2000: 16), women's personal motivations for starting a business are related to their need to be independent, achieve job satisfaction, attaining personal fulfilment, to be creative and to have freedom and total control.

Women entrepreneurs are furthermore also motivated by both financial rewards and personal rewards, such as being one's own boss, having independence, freedom, total control and putting one's knowledge and skills into practice (Bradley and Boles, 2003: 12). Winn (2004: 150) believed that women start their own businesses because they desire autonomy and control and that they are confident that their businesses will provide income and personal satisfaction.

Lee-Gosselin and Grisè (1990: 425) argued that women start their own businesses because of a desire to actualise oneself, use one's talents, to be recognised by others, to obtain work experience, to control one's own life, to state one's own identity, to have something one can call one's own, a means through which one can express oneself and to create jobs for members of their family. Business ownership in this regard can be seen as an innovative response to some sociological constraints.

Mallon and Cohen (2001: 223) found that many women have few opportunities for professional development in terms of promotion, learning and growth within their organisations. For these women, work has lost its challenge, and feelings such as stagnation and "being stuck" might act as triggers for change. Self-employment then offers "room to grow" and make some mistakes, "air to breath" and opportunities to "flourish". According to Mallon and Cohen (2001: 225), another reason for women choosing self-employment is the unwillingness to tolerate the lack of recognition. By being self-employed, women regained a

sense of themselves and their personal integrity, which were stripped from them in their organisations.

Long and inflexible working hours, low pay, lack of respect, poor treatment, stressful working environments, lack of control and lack of promotional prospects are all factors that can push women into entrepreneurship (Heilman and Chen, 2003: 360). According to Heilman and Chen (2003: 360), a factor that is very appealing and which might pull women into entrepreneurship is the fact that an individual's career success will be dependent on her own merit while running her own business, and not on the preconceptions and prejudices of others in the workplace.

Lee-Gosselin and Grisè (1990: 431) highlighted that women start a business to create their own employment and to use it as an instrument for personal development that is a flexible response to their economic and professional needs. Bradley and Boles (2003: 21) found that flexibility was a particularly important motivational factor for women with children, because self-employment has the advantage of combining work with childcare needs. Ghosh and Cheruvalah (2007: 149) also emphasised the need of women for a flexible work schedule. Women thus choose self-employment rather than wage employment to obtain greater flexibility in the allocation of their time to work and family responsibilities. In many cases they are willing to trade off higher earnings for more time that can be devoted to family responsibilities (Weiler and Bernasek, 2001: 100).

According to Orhan (1999: 2), DeMartino and Barbato (2003: 828) and Wasilczuk and Zieba (2008: 161), one specific motivation for women to start a business is the desire to balance their professional and family life. Winn (2004: 145) commented that a woman's choice of business is closely linked to her family situation and the constraints that these responsibilities impose.

In Southern Africa women desire to create a better environment for their families and communities and are highly conscious of the social contribution their businesses can make to help others. Women believe that it is possible to create something both socially conscience and economically viable, and blend their business relationships with other relationships in their lives including their families and ties to the community (McClelland, Swail, Bell and Ibbotson, 2005: 9).

More women entrepreneurship is found in low-income countries with higher birth rates. For women in these countries, involvement in entrepreneurship may mean that self-employment

is a way to circumvent institutional and cultural constraints and to provide necessary family income. Thus, greater economic security, such as welfare payments or stable employment, is associated with less opportunity and necessity entrepreneurship in these countries (Minniti and Arenius, 2003: 11).

The size of the informal sector might also positively impact women entrepreneurship. Informal sector activity might appeal to women, since it is relatively easy to operate in and often close to home. Informal activity might be a way for women to realise greater flexibility to combine work and household activities (Verheul *et al.*, 2004: 9).

General factors pointed out by Maas and Herrington (2006: 51), which might positively influence women in South Africa and pull them into entrepreneurship, are, among others, that Government policies are favouring previously disadvantaged groups such as women, that more role models exist for women entrepreneurs, networking with other women entrepreneurs helps them to improve themselves and that women tend to be more financially independent than a few years ago.

Obstacles to women entrepreneurship

It is, furthermore, essential to determine the factors that might inhibit entrepreneurial activity among women, taking into consideration the large contribution women entrepreneurs can make to the South African economy.

Richardson, Howart and Finnegan (2004: 82) commented that women entrepreneurs suffer from significant material constraints through to unhelpful attitudes arising from society's negative attitudes towards women in business. Women entrepreneurs often feel that they are victims of discrimination. This statement was confirmed by Orhan (1999: 2) who found that one of the most interesting issues with regard to women entrepreneurship is the different ways women are discriminated against in concealed ways.

According to Van Vuuren and Groenewald (2007: 273), the following factors generally inhibit entrepreneurship: limited access to start-up capital, appropriate education system, government regulations and bureaucracy, lack of business knowledge, costs of entry, discrimination and lack of government assistance.

Wasilczuk and Zieba (2008: 160) believe that financial barriers are one of the most important obstacles women have to face when setting up and developing a business. Women tend to seek small personal loans because they tend to start small firms. Banks show little interest in

small loans or micro-credits, because of relatively high handling costs. Bankers also have a pessimistic view of women's creditworthiness, which fosters a reluctance to grant credits.

Women, furthermore, start smaller businesses specifically in the service sector and often work part-time in the business. Bruni, Gherardi and Poggio (2004: 260) believe that the difficulty encountered by women to obtain credit forces them to choose low capital intensive ventures, such as those in the service sector.

According to Kuratko and Welsch (1994: 333), most women entrepreneurs have not been in business before and many have little management experience, although they generally have a higher level of education than their male counterparts. McClelland *et al.* (2005: 4) argued that the lack of managerial experience is one of the largest barriers women have to overcome in the entrepreneurial world. Coleman (2007: 315) stated that women are less well prepared for business ownership than men in the areas of human and financial capital. Women are less likely to be educated in the business disciplines and have fewer years of management experience. McClelland *et al.* (2005: 4) further remarked that women are predominant employed in the "traditional sectors" (service, retail, teaching, office administration and secretarial areas), rather than in executive managerial, scientific or technical areas. These women entrepreneurs therefore gain their first managerial experience in their own businesses.

Another large constraint to women entrepreneurs is the family commitments of married women (O'Neill and Viljoen, 2001: 39). Winn (2004: 147) stated that married women, especially those with children, live in two worlds: one at work and one at home. Child-rearing responsibilities can interfere with the best of intentions (Chell and Baines, 1998: 132). While it is often permissible to miss a day at the office to tend to family problems, small businesses have less slack than large companies, and small business owners have less independence than their employees. These small business owners find that they have more constraints and less flexibility than they anticipated in the planning stages of their businesses. For women, this is particularly troublesome.

Jalbert (2000: 30) explained that the combination of two jobs, one at work and one at home, is difficult for women in any country, but it becomes a double burden in a developing economy where poverty and a lack of infrastructure, such as a lack of water, electricity, roads, communication and business sites, can make the most basic tasks harder and more time-consuming.

Richardson *et al.* (2004: 82) pointed out that despite all the constraints, many women in Africa run successful businesses that employ others. This business success gives women entrepreneurs a great sense of pride, worth and personal satisfaction. Furthermore, they are living role models for other women in their specific communities and social settings.

Support for women entrepreneurs

Winn (2004: 151) argued that the critical factors for women to succeed in independent businesses need to be understood to provide a better education and support system. Governments can provide female entrepreneurs with special loans, subsidies, funds, enterprise centres, entrepreneurship awards, counselling, training, advisory support, information products and web portals (Verheul *et al.*, 2004: 14). According to Minniti and Arenius (2003: 24) and Kock (2008: 116), governments should address factors such as education, training and family-work reconciliation. Policies should thus create and guarantee the existence of underlying conditions favourable to an entrepreneurial environment rather than be active promoters of start-up activities.

Abimbola, Emmanuel and Ahmadu (2007: 1101), however, found that in Nigeria many programmes and legislation have been implemented to improve life for women entrepreneurs, but have not yielded results. This happened because most of the facilities embedded in the programmes do not reach those in need of them, but are used to service political and other loyalties. These researchers believe that the dispensation of facilities should rather be done through community-based associations or groups, rather than through political affiliations. Effective monitoring mechanisms should also be put into place to ensure that facilities are put into proper use and to prevent the misapplication of funds.

Shelton (2006: 294) advised that in order to improve the survival and performance of women-owned ventures, programmes should be implemented to assist women in selecting appropriate work-family management strategies. If work-family conflict is addressed, a potential stumbling block for women business owners will be removed and the effectiveness of other programmes will be enhanced. Kock (2008: 110) argued that many women want post-start-up support that is accessible after trying out the skills learned in earlier training. Mentoring is one method of providing this support, which can be very effective as it addresses the specific problems faced by the individual entrepreneur. The support can include individual as well as group-based assistance directed at specific problems where mentors serve as role models.

Langowitz and Minniti (2007: 341) found that women tend to perceive themselves and the entrepreneurial environment in a less favourable light than men. Programmes aiming to improve perceptions of aspiring women entrepreneurs may lead to higher rates of business start-up.

Training of women entrepreneurs

Botha (2006: 146) argued that there is a need for training programmes designed specifically for women entrepreneurs. This view was also expressed by Kock (2008: 115), when she stated that gender sensitivity of programme design and service delivery is critical. Furthermore, Botha (2006: 146) advised that a women entrepreneurship programme should include the following areas of importance: financial assistance, management assistance and training as well as networking, mentoring and counselling.

If information regarding needs, challenges and barriers to business start-up and growth for women entrepreneurs is available, effective programmes can be developed and implemented to support women entrepreneurship in South Africa (Maas and Herrington, 2006: 39). Kock (2008: 115) recommended that information should be gathered to ensure that relevant programmes are developed to support women entrepreneurs. Factors that might give women the advantage in a business environment should be determined. If these factors are known, they might be positively incorporated in business start-up and growth.

RESEARCH METHODOLOGY

The study consists of two phases, namely a literature study and an empirical study.

Development of the measuring instrument

The literature study provided valuable insight into the identification of aspects influencing women entrepreneurship. Standard questionnaires, developed by the North-West University Business School, were used to gather data in Gauteng and Lesotho. Information was gathered regarding the biographical information of the participating women entrepreneurs, the structure of their businesses, the motivational factors for starting their businesses, the obstacles that they are currently experiencing and their support and development needs.

Study population and sampling method

The target population of this study was micro-, very small, small and medium-sized women-owned businesses in Gauteng and Lesotho. These two areas were chosen to make a comparison with regard to the dynamics of women entrepreneurship between a typical urban and rural area. A convenience sample was used, by means of a snowball sampling

technique, to identify women-owned businesses that could participate in this study. To generate a preliminary list of women-owned businesses, well-known women-owned businesses in these regions were contacted. These women acted as informants and identified other potential women-owned businesses for inclusion in the sample. The women-owned businesses were then contacted to gauge their willingness to participate in the study. A list of 160 women-owned businesses willing to participate in the study in Gauteng and 75 in Lesotho was compiled as a result of these efforts.

Data collection

Questionnaires were mailed or delivered by hand to the women-owned businesses listed on the database. Each questionnaire included a covering letter that guaranteed the confidentiality of the responses, as well as a return-paid envelope in order to make it as easy as possible for respondents to participate in the research. A total of 116 (72.5% response rate) usable questionnaires were returned from the Gauteng sample and 54 (72% response rate) from the Lesotho sample, which were subjected to further statistical analysis.

Statistical analysis

Data collected was statistically analysed using STATISTICA (StatSoft, 2009) and SPSS (SPSS, 2009). Data from the questionnaires was coded, investigated for integrity, analysed and presented in useful outputs, such as frequency tables. The frequency tables were used to draw conclusions and to make recommendations regarding the development of women entrepreneurs in these areas.

RESULTS AND DISCUSSION

Although the results indicate differences in the demographical profile between the participating women entrepreneurs and their respected businesses from Gauteng and Lesotho, it will, due to a constraint on the length of the paper, not be discussed in detail. Some of the differences will, however, be highlighted.

Biographical information of respondents

Biographical information of the owner-managers of the participating women-owned businesses was obtained, including their age group classification, marital status and highest academic qualification. The results indicate that a quarter of the women entrepreneurs in Lesotho obtained a highest academic qualification lower than matric. Women entrepreneurs in Gauteng, in general, obtained higher academic qualifications in direct comparison with their Lesotho counterparts. With regard to the age group classification and marital status, the tendencies in the two areas investigated are similar.

Structure of the participating businesses

Information on the structure of the participating women-owned businesses was also gathered. The results indicate that the participating women-owned businesses in Lesotho are in general smaller than those in Gauteng. The two dominant industries in Gauteng are retail trade and services. The most women-owned businesses in Lesotho are also in the retail trade and services industries, but a quarter of the businesses are in the agricultural sector. Most of the businesses are operated as sole proprietorships.

Most of the participating businesses in Lesotho are situated at home or in the CBD, whereas a high percentage of businesses in Gauteng are situated in outlying areas or suburbs. These statistics are in the view of the researchers more a function of the difference in urbanisation and economic development between the two areas.

Business start-up information

Information gathered concerning the funding used during the start-up of the businesses, the age of the participating businesses, the existence of role models, the experience of entrepreneurs before self-employment and the path to business ownership was gathered. The main differences with regard to the results of the start-up information between Gauteng and Lesotho are that more Lesotho women entrepreneurs use their personal savings to start their respected businesses and fewer used bank loans in comparison with the Gauteng women entrepreneurs. The Lesotho entrepreneurs also have more access to role models that owned businesses. A quarter of the Lesotho female entrepreneurs were unemployed (less than 10% in Gauteng) when they founded their respected businesses. A further main difference is that a third of the Gauteng businesses were purchased, but only 2% in Lesotho.

Motivation to self-employment

The main motivational factors for women entrepreneurs entering self-employment were furthermore assessed. The results can be utilised to determine the influence of these motivational factors on the specific development needs of women entrepreneurs. With regard to the urban study (Gauteng), the average or mean (\bar{x}) and the standard deviation (s) of each of the 15 items indicating motivational factors for entering self-employment are indicated in Table 1 below. The motivational factors are ranked from the highest to the lowest mean score. With regard to the study in Lesotho, the respondents were requested to indicate whether a specific motivational factor was applicable to their situation. The ranking of a particular factor is indicated in brackets (where 1 = the highest ranking, and 12 = the lowest ranking).

Table 1: Motivation to self-employment

Variable	Gauteng, RSA		Lesotho	
	Mean	Std. dev.	Frequency	%
Self-fulfilment	6.33	1.62	12 (5)	22.22%
Need for a challenge	6.30	1.17	18 (3)	33.33%
Confidence in the product/service offered	6.09	1.10	-	-
The need for independence	5.77	1.62	45 (1)	83.33%
Need for flexible work schedule	5.25	1.97	31 (2)	57.41%
Role models and other people's influences	4.99	1.88	12 (5)	22.22%
Insufficient family income	4.98	2.04	12 (5)	22.22%
Ensure high job security	4.74	2.04	9 (9)	16.67%
Dissatisfaction with salaried jobs	4.71	2.16	18 (3)	33.33%
Desire for wealth	4.70	2.04	10 (8)	18.52%
To develop my hobby	4.65	2.28	6 (11)	11.11%
Compatibility with family duties	4.04	2.24	-	-
Difficulty finding a job	3.24	2.37	7 (10)	12.96%
Redundancy	2.58	1.92	9 (9)	16.67%
Entered the family business	1.86	1.10	2 (12)	3.7%

* Indicates the ranking, where 1 = high, and 10 = low

Gauteng

Where Likert scale-type questions (where 1 = “Strongly disagree” and 7 = “Strongly agree”) are asked, relatively low numbers represent disagreement with the statement, while relatively high numbers represent agreement with the statement. A higher number thus suggests that the respondents perceived the statement as true. In the same way, a low number represents disagreement and suggests that the statement is perceived to be false.

The respondents in the Gauteng province rated **self-fulfilment** as the highest motivational factor. Participants indicated a very high mean of $\bar{x} = 6.33$ for this statement. Other motivational factors that also obtained high levels of agreement were **need for a challenge** ($\bar{x} = 6.30$) and **confidence in the product/service offered** ($\bar{x} = 6.09$). Two items yielded average means higher than five. The factor, **need for independence** yielded an average

mean of $\bar{x} = 5.77$ and **need for flexible work schedule** yielded an average mean of $\bar{x} = 5.25$.

Seven items yielded average means higher than four. These are **role models and other people's influences** ($\bar{x} = 4.99$), **insufficient family income** ($\bar{x} = 4.98$), **to ensure high job security** ($\bar{x} = 4.74$), **dissatisfaction with salaried jobs** ($\bar{x} = 4.71$), **desire for wealth** ($\bar{x} = 4.70$), **to develop my hobby** ($\bar{x} = 4.65$) and **compatibility with family duties** ($\bar{x} = 4.04$).

The factors **difficulty finding a job** ($\bar{x} = 3.24$), **redundancy** ($\bar{x} = 2.58$) and **entered the family business** ($\bar{x} = 1.86$) yielded the lowest average means, indicating that respondents in Gauteng do not consider these factors as important motivational factors for starting their respected businesses.

Lesotho

Table 1 indicates that a total of 45 (83.33%) of the businesses were established because the women entrepreneurs **needed independence**. This is followed by 31 (57.41%) women entrepreneurs who were motivated by the **need for flexible schedules**.

The **need for a challenge** and **dissatisfaction with their salaried jobs** motivated 18 (33.33%) of the women entrepreneurs, respectively. Social **status, role models and the influences of other people**, including **friends and family members**, and **insufficient family income**, motivated 12 (22.22%) women entrepreneurs. In addition, the **desire for wealth** motivated only 10 (18.52%) women entrepreneurs. A total of nine (16.67%) entrepreneurs indicated that they were motivated by **high job security** and **redundancy**. Only 12.96% (7) of women entrepreneurs were motivated by the **difficulty in finding a job** and 11.11% (6) were motivated by the **further development and expansion of their hobby**.

Obstacles facing participating women entrepreneurs

The respondents were requested to indicate the obstacles that they are facing while managing their businesses. The responses of the Gauteng entrepreneurs were set out on a Likert scale-type questionnaire (where 1 = "Strongly disagree" and 7 = "Strongly agree"). Lower numbers represent disagreement with the statement and higher numbers represent agreement with the statement. The results were then ranked from the highest to the lowest mean score and are presented in Table 2. The respondents in Lesotho were requested to

indicate whether they currently experience a specific obstacle in managing their businesses. The ranking of a particular factor is indicated in brackets (where 1 = the highest ranking, and 12 = the lowest ranking) in table 2.

Table 2: Results of the assessment of the obstacles facing women entrepreneurs

Variable	Gauteng, RSA		Lesotho	
	Mean	Std. dev.	Frequency	%
Liquidity and other financial problems	5.44	1.79	-	-
Gaining acceptance/ respect of people (internally and externally)	5.14	1.92	-	-
Inter-role conflict (work/home conflict)	4.84	2.09	25 (3)*	46.3%
Lack of business management skills	4.71	1.85	37 (1)	68.52%
Lack of timely business information	4.46	1.76	19 (4)	35.19%
No time for training/ upgrading of skills	4.41	1.96	-	-
Awareness/ Access to business support	4.36	1.84	-	-
Family pressures (gender-role expectations)	4.31	1.99	6 (11)	11.11%
Isolation from business network	4.27	1.83		
Socio-cultural environment (lack of respect from male community and stereotype)	3.31	1.81	3 (12)	5.56%
Lack of female role models	3.02	1.68	19 (4)	35.19%
Lack of education and training	-	-	35 (2)	64.81%
Inequality of access to credit	-	-	14 (8)	25.93%
Inhibiting laws and regulations	-	-	8 (10)	14.81%
Pressure of childcare	-	-	18 (7)	33.33%
Lack of self-confidence	-	-	9 (9)	16.67%
Risk adverse (great fear of failure)	-	-	19 (4)	35.19%

* Indicates the ranking, where 1 = high, and 10 = low

Gauteng

The obstacle that yielded the highest level of agreement was **liquidity and other financial problems** ($\bar{x} = 5.44$), followed by **gaining acceptance/respect of people (internally and externally)** ($\bar{x} = 5.14$). Other obstacles that also yielded relatively high rankings (indicating that the participating women entrepreneurs experience those obstacles) are **inter-role**

conflict (work/home conflict) ($\bar{x} = 4.84$) and **lack of business management skills** ($\bar{x} = 4.71$).

The results, however, indicated that the participating women entrepreneurs ranked the two obstacles **socio-cultural environment (lack of respect from male community and stereotype)** ($\bar{x} = 3.31$) and **lack of female role models** ($\bar{x} = 3.02$) the lowest, indicating that they did not currently perceive these two factors as important obstacles influencing their businesses.

Lesotho

Table 2 indicates that 68.52%, representing 37 women entrepreneurs indicated that they **lack business management skills**, while 64.81% (35) **lack education and training**. A total of 46.3% (25) of the women face the problem of **inter-role conflict**. A total of 19 women entrepreneurs are inhibited by a **lack of timely information**, a **lack of role models** and are **highly risk averse**, representing 35.19%, respectively.

Eighteen (33.33%) women entrepreneurs indicated the **pressure of childcare** as an inhibitor. The inequality of **access to credit** is indicated by 14 (25.93%) women entrepreneurs, while nine (16.67%) women entrepreneurs **lack self confidence** in performing their entrepreneurial activities.

Furthermore, 14.81% (8) women entrepreneurs are, according to their perceptions, inhibited by **laws and regulations**. **Family pressure** and the **isolation from business networks** are problems faced by 11.11% (6) of women entrepreneurs, respectively. The last problem, encountered by 5.5% (3) of the participating women entrepreneurs, is the negative **influences of the socio-cultural environment**.

Support needs of women-entrepreneurs

The participating women entrepreneurs were furthermore requested to indicate whether a specific support need is applicable to them. The results in Table 3 are ranked based on the support needs of the Gauteng entrepreneurs. The ranking of a particular factor indicated by the Lesotho entrepreneurs is indicated in brackets (where 1 = the highest ranking, and 12 = the lowest ranking).

Gauteng

The majority of the participants (88 or 75.86%) indicated that they need **marketing support**, followed by 87 (75%) who need **financial support**. A total of 74 (63.79%) and 70 (60.34%) indicated that they need **growth support** and the need to **network with other business owners**, respectively.

Only 27 (23.28%) respondents indicated that they require **infrastructure**, 25 (21.55%) require **psychological support** and 24 (20.69%) require **technical support**.

Table 3: Results of the support needs of women-entrepreneurs

Variable	Gauteng, RSA		Lesotho	
	Frequency	Percentage	Frequency	Percentage
Marketing support	88	75.86%	18 (6)*	33.33%
Financial support	87	75.00%	39 (2)	72.22%
Growth support	74	63.79%	-	-
Networking with other business owners	70	60.34%	25 (3)	46.3%
Business advice, information, counselling, mentoring	68	58.62%	25 (3)	46.3%
Women entrepreneurship specifically based on policies for the area	65	56.03%	-	-
Legal support	51	43.97%	-	-
Training/knowledge/skills	43	37.07%	42 (1)	77.78%
Tools, equipment, machinery	43	37.07%	-	-
Suitable business premises	39	33.62%	21 (5)	38.89%
Infrastructure (roads/telephone/electricity)	27	23.28%	9 (10)	16.67%
Psychological support	25	21.55%	-	-
Technical support	24	20.69%	10 (9)	18.52%
Transport	-	-	6 (11)	11.11%
Computer	-	-	13 (7)	24.07%
Internet services	-	-	13 (7)	24.07%

* Indicates the ranking, where 1 = high, and 10 = low

Lesotho

Table 3 shows that out of the 54 participating women entrepreneurs in the Lesotho study, 39 (72.22%) indicated that they need **financial support** to develop their businesses, while 42 (77.78) indicated that they need to **acquire business knowledge, skills and training**. A total of 34 (62.96%) women entrepreneurs indicated that they need support in the form of **tools, equipment and machinery** and 25 (46.3%) need support in the form of **business advice and information**.

A total of 18 (33.33%) women entrepreneurs indicated that they need **marketing support**, while 21 (38.89%) indicated that they need support in the form of **suitable business premises**. In addition, 10 (18.52%) indicated that they need **technical support**, while six (11.11%) need **transport support**. **Networking with other business owners** is needed by 25 (46.3%) women entrepreneurs. Furthermore, nine women entrepreneurs need support in the form of **infrastructure**, while 13 (24.07%) need **computer and Internet services support**.

CONCLUSIONS

The findings of this study are broadly consistent with expectations. Without further statistical analysis of the data, it seems by observation that with regard to the demographical and start-up information, the Gauteng women entrepreneurs are more typical of an urban business environment and the Lesotho entrepreneurs are more typical of a rural business environment. More research (larger sample) is, however, needed before these results can be generalised to the rest of Southern Africa.

The Gauteng study found that women entrepreneurs are mostly drawn to self-employment by pull factors rather than push factors. The main motivators for women entrepreneurs to start a business are the need for a challenge, self-fulfilment and confidence in the product or service offered. Women entrepreneurs in Lesotho are motivated to start their own business by both push and pull factors. The most important motivators for starting a business are the need for independence, the need for flexible work schedules, the need for a challenge, dissatisfaction with salaried jobs, the need for social status, the influence of role models and insufficient family income. The results of this study confirm the findings of previous researchers (Ghosh and Cheruvalah, 2007; Heilman and Chen, 2003; Hunter-Smith, 2006; DeMartino and Barbato, 2002; Mallon and Cohen, 2001; among others).

With regard to the obstacles facing women entrepreneurs in both areas, the findings are as expected. The support and development needs indicated also reflect the obstacles. The

practical recommendations offered will try to overcome these obstacles to ensure the success of small and medium-sized women-owned businesses in Southern Africa.

RECOMMENDATIONS

Gauteng

It is clear from the research results that the women entrepreneurs in Gauteng's greatest needs are marketing, and financial and networking support. To satisfy the needs of these women entrepreneurs, two possibilities can be exploited. Firstly, local representative support initiatives, which will provide in the development and business needs of women entrepreneurs, can be established. This organisation should interact with the local municipalities and government to implement policies that will enhance women entrepreneurship in the province, as well as provide training and development programmes for women entrepreneurs. This initiative can be extended to other provinces countrywide. The organisation should be marketed properly to reach as many women entrepreneurs as possible.

Secondly, the existing organisations established for women entrepreneurs in Gauteng, can broaden their scope of operations to provide efficient training and development programmes to satisfy the business needs of the women entrepreneurs. It is the view of the researchers that these organisations currently only provide role models, motivational speakers and business information, and are not visible to all business women in Gauteng. Proper marketing of the organisations should also be done. The organisations could cooperate with the local municipalities or government to implement policies that will enhance women entrepreneurship in the province. This initiative could be then extended to other regions country wide.

The efficiency of the above-mentioned organisations with regard to visibility and service rendered to women entrepreneurs should be measured at a certain frequency to determine and rectify operational gaps.

Organisations specifically established in South Africa for women entrepreneurs, such as the South African Women Entrepreneurs' Network (SAWEN), should improve their visibility to women entrepreneurs' country wide, as many women entrepreneurs are not aware of the existence of these organisations.

Women entrepreneurs in Gauteng and smaller regions such as Emfuleni or Ekurhuleni could build their own support networks. These networks can include family, friends and other business women that can support women entrepreneurs during turbulent times.

Lesotho

In most cases, banks or other financial institutions, when granting credit, have the requirement that the potential lender business should have a current account. Most women entrepreneurs only have a savings account as a result they may be denied credit. It is thus recommended that women entrepreneurs in Lesotho should hold current accounts to minimise inequality in granting credit by the banks.

It is recommended that more organisations should be established for the development of women entrepreneurs in Lesotho. These organisations could support them with training and development, financing the business and other support for their entrepreneurial development. Training and development could help women entrepreneurs to obtain management skills, including skills in preparing business plans and financial statements which could, furthermore, bridge the gap in the inequality in granting credit by the banks. In addition, awareness campaigns should be held so that women entrepreneurs could have knowledge about those organisations with the result that they could then utilise their support and facilities.

Government and non-governmental organisations in Lesotho should undertake a range of initiatives to develop women entrepreneurs in Lesotho. These should include the nature and dynamics of women entrepreneurship, the challenges of women in business and the utilisation of technology for women in business. Financial support institutions and various councils that may be partners in offering training and mentoring programmes should, furthermore, be implemented.

The government should provide a free slot on national radio and television for women entrepreneurship training, education and networking with other women entrepreneurs.

It seems that women entrepreneurs are not aware of the new development in the approval of Act no. 60 of 2006, which removes women from minority status. For instance, banks still need the husband's approval before granting credit. Government should monitor the implementation of that Act. In addition, women should be aware of the Act so that they do not allow such discrimination.

Most women entrepreneurs have the pressure of childcare and experience work-home conflict. More crèches should be built to minimise this kind of obstacle.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The study attempted to make a contribution to the body of knowledge on women entrepreneurship and can be regarded as a small step towards moving away from the current dependence on anecdotal evidence and case studies. This study, however, only assessed some of the aspects concerning women entrepreneurship in a relatively small sample and can be regarded as an exploratory study. More comprehensive research is still needed to gain more insight into the motivational factors for self-employment of women entrepreneurs, the obstacles facing them and their support and training needs to enhance our understanding of these issues.

The study was only conducted in one province in South Africa and in Lesotho and due to the convenience sampling technique at a very small sample this cannot be considered to be representative of all small and medium-sized women-owned businesses in Southern Africa. Care should therefore be exercised in the interpretation and utilisation of the results, and the findings of the study cannot be generalised. In other words, the typical women-owned business could be underrepresented in the sample.

The findings of this study were based only on descriptive, lower-level statistics. Further research is thus needed to gain more insight into the unique challenges facing women entrepreneurs and their training and development needs. It is recommended that more advanced statistical procedures, such as regression and factor analyses should be utilised in the further development of the knowledge base to truly understand the dynamics of women entrepreneurship.

Based on the fact that published evidence of a quantitative nature of the unique challenges facing women entrepreneurs both nationally and internationally is still limited, the findings of this study present challenges for further research.

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THE PERCEIVED IMPACT OF BROAD-BASED BLACK ECONOMIC EMPOWERMENT ON SMALL AND MEDIUM-SIZED FAMILY BUSINESSES: AN EXPLORATORY STUDY

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ABSTRACT

The objective of this study was to assess the opportunities and threats of Broad-Based Black Economic Empowerment (BBBEE) on family businesses as well as the perceived impact of black economic empowerment on succession in family businesses. Data from 31 questionnaires completed by the owner-managers of family businesses was collected and analysed. This study found that the participating owner-managers perceived the possibility for the business to get access to contracts, the accusation of new customers and to compete in new unexplored markets as potential opportunities for the family business. Major threats indicated are the employment of incompetent people, the family losing control of the business and the administrative burden associated with complying with BBBEE and the codes of good conduct. The owner-managers, furthermore, indicated that BBBEE could lead to a conflict of interest and can complicate succession planning, decision making regarding succession and the transfer of management to the next generation family members. Practical recommendations are suggested to the Government, Department of Trade and Industry and family businesses to ensure the effective implementation and management of BBBEE in small to medium-sized family businesses.

INTRODUCTION

Since apartheid was abolished with the first democratic election in South Africa in 1994, businesses have been encouraged to increase the participation of the black majority population in economic wealth creation activities (Wolmarans and Sartorius, 2009: 180, Jack, 2007). Broad-based black economic empowerment (BBBEE), in particular, has become increasingly popular as a vehicle for the redistribution of wealth, an increase in the participation of blacks in the economy and by facilitating corporate ownership by blacks.

Family businesses have made a positive contribution towards the South African economy for hundreds of years (Van der Merwe, 1998) and play currently a critical part in wealth creation and economic development to alleviate poverty (Farrington, 2009: 65; Piliso, 2006; Venter, 2003: 33; Ackerman, 2001: 325). The greatest reward for family business owners is the knowing that they will leave behind a legacy. Many family business owners therefore fear that complying to BBBEE could have a major negative impact on the dynamics and future success of the family business (Orton, 2008).

In the majority of cases the unique composition of small to medium-sized family businesses makes the transition to comply with the BBBEE legislation a very delicate matter. These family businesses are being built up over a number of years through hard work and ultimate dedication of a single family, and it is for this reason that family businesses cannot be evaluated on the same grounds as corporate organisations.

This study will focus on family businesses and specifically small and medium-sized family businesses. The study will further investigate the transition to comply with BBBEE legislation by highlighting the potential positive implications as well as suggesting the most appropriate ways of implementing the process. By doing this the entire process can be eased for family business owners.

PROBLEM STATEMENT

Economic policies and legislation prior to 1994 in South Africa did not make provision for all South Africans to participate in the economy and economic activities, which resulted in some imbalances between different groups in South Africa. This resulted in the current Government laying down new legislation in 2003 as an effort to open up the economy and include all South Africans in the economic activities of the country. Newly imposed legislation by Government led to new challenges and obstacles for family business owners. The single

most important initiative was the Broad-Based Black Empowerment Act (BBBEE) of 2003 (Act 53/2003).

The objectives as set out in the Broad-Based Black Economic Empowerment (BBBEE) Act contradicted everything the majority of family businesses strive to achieve. The aspects of management and wealth sharing make the issue of BBBEE even more complex. The new legislation provokes enormous emotional distress to the majority of family businesses, as these legislative measures are constructed with the intention to be implemented in large corporate organisations. Although the initial intend was to focus on corporate organisations and Government associates these legislative measures are now also imposed on smaller family businesses.

Typical family businesses have been around for centuries and are still characterized by strong family bonds and family cultures, for these businesses the idea of sharing their businesses with strangers is most of the time a daunting thought. Families might not be aware of the true implications that BBBEE can have on their businesses, or the opportunities that it can offer to the family business to grow and prosper. Numerous family businesses might be of the opinion that an empowerment partner would actually not empower the business at all, but might rather have a negative impact on the business.

Relatively little research has been carried out in South Africa on BBBEE (refer to Wolmarans and Sartorius, 2009; Booysen, 2007; Du Toit, Kruger and Ponte, 2008; Horn, 2007; Janssens, Sefoko, Van Rooyen and Bostyn, 2006) and no research could be found concerning the impact of BBBEE on family businesses. This study can thus make an important contribution to the body of knowledge and lay the foundation for further research on the topic.

The aim of this study is to address these issues and challenges faced by so many family businesses in South Africa, who are compelled to comply with the laid down legislation. Secondly the study will make recommendations based on the analyses of the questionnaire completed by family business owners, these recommendations will aim to ease the impact and implementation of BBBEE for these business owners.

OBJECTIVES OF THE STUDY

Primary objective

The primary objective of this study is to assess the impact of BBBEE on small and medium-sized family businesses in South Africa, and to make recommendations to Government, the Department of Trade and Industry and family businesses relating to the management of this issue.

Secondary objectives

In order to address the primary objective of this study, the following secondary objectives were formulated:

- To obtain insight into BBBEE by means of a literature review.
- To assess the impact of BBBEE on small and medium-sized family business in Sedibeng (Vaal Triangle) through a structured questionnaire.
- To suggest practical recommendations to family businesses, resulting in the successful management of BBBEE in their businesses.

LITERATURE REVIEW

Numerous attempts have been made to articulate conceptual and operational definitions of family firms (Sharma, 2004: 3). Various researchers reviewed existing definitions, and attempted to consolidate thoughts and conceptualised other definitions on family businesses (Farrington, 2009: 35; Chrisman, Chua and Sharma, 2005: 556; Klein; Astrachan and Smyrnios, 2005: 325; Habbershon, Williams and MacMillan, 2003; Venter, 2003; among others).

Due to the lack of consistency in defining family businesses and the fact that the study focuses on small to medium-sized family businesses with the dream to transfer it to the next generation, the definition of Ibrahim and Ellis (2004: 5) has been adopted for this study. They define family businesses as enterprises that are at least 51% owned by a single family, of which two or more members are actively involved in management or the operation of the business and the transfer of leadership to the next generation is anticipated (Ibrahim and Ellis, 2004: 5).

The South African National Small Business Act (1996) and National Small Business Amendment Act (2004: 2) classify micro, very small, small and medium-sized businesses as businesses that employ less than 200 full-time equivalents of paid employees. *The focus of this study* was thus small and medium-sized family businesses, as defined by this Act.

Broad Based-Black Economic Empowerment

With the enforcement of the Broad-Based Black Economic Empowerment (BBBEE) Act of 2003 (Dti, 53/2003), the definition as stated in this Act is generally used to define BBBEE and therefore this definition will also be used in this study. The definition states:

“Black People” is the generic term which means African, Coloureds, and Indians (53/2003: 4). “Broad-Based Black Economic Empowerment” means the economic empowerment of all black people including women, workers, youth, people with disabilities and people living in rural areas through diverse but integrated socio-economic strategies that include, but are not limited to:

- Increasing the number of black people that manage, own and control enterprises and productive assets.
- Facilitating ownership and management of enterprises and productive assets by communities, workers, cooperative and other collective enterprises.
- Human resource and skills development.
- Achieving equitable representation in all occupational categories and 20 levels in the workforces.
- Preferential procurement.
- Investment in enterprises that are owned or managed by black people (Dti, 2003: 4).

The South African Broad-Based Black Economic Empowerment (BBBEE) Act (53/2003) came into effect on 9 January 2004. According to this Act all businesses with an annual turnover of R5 million or more that want to do business with Government have to implement BBBEE into their businesses. The Act was followed up by the Codes of Good Practice on Broad-Based Black Empowerment (Dti, 2009).

Difficulties and pitfalls of BBBEE

Considering the pioneering nature of South Africa’s legislation and the fact that it has been a work in progress for only 13 years it is understandable that there are implementation issues that need to be addressed. In doing so, it is important that the government balance short-term needs with longer-term strategies (Arendse, Peralta and Stark, 2007: 56).

Janssens *et al.* (2006: 284) argue that BBBEE has manifested itself into three basic pitfalls. Firstly, there was the risk that BBBEE will be limited in scope, where the white elite would be

replaced by the black elite, which in fact has little to do with a “broad-based” approach. Secondly, there was an emergence of an empowerment that lacked depth, and this has led to black employees being dependent on the ‘goodwill’ of their employers – hence the connotation ‘pseudo-empowerment’. Thirdly, it became clear that assigning previously disadvantaged individuals to positions or tasks without possession of relevant qualifications and skills led to frustration and an effect on economic efficiency of businesses, and has led to bankruptcy in others (Janssens *et al.*, 2006: 284).

BBBEE is also a colour concept. The determination of when a company is empowered is objectively defined, for example, when 25.1 per cent of the entity’s management are black then the entity is referred to as black-empowered (Janssens *et al.*, 2006: 284).

The issue of financing BBBEE deals are still being seen as one of the major obstacles in implementing this initiative especially for small and medium-sized businesses and this is an issue that have an ongoing hampering effect on the transformation process (Jacobs, 2007: 53). Start-ups and smaller BBBEE businesses have difficulty raising funds as local investors and financial institutions tend to be risk averse, regardless of boasting the most developed financial sector on the continent with the Johannesburg stock exchange ranking in the top 20 globally (Arendse *et al.*, 2007: 55).

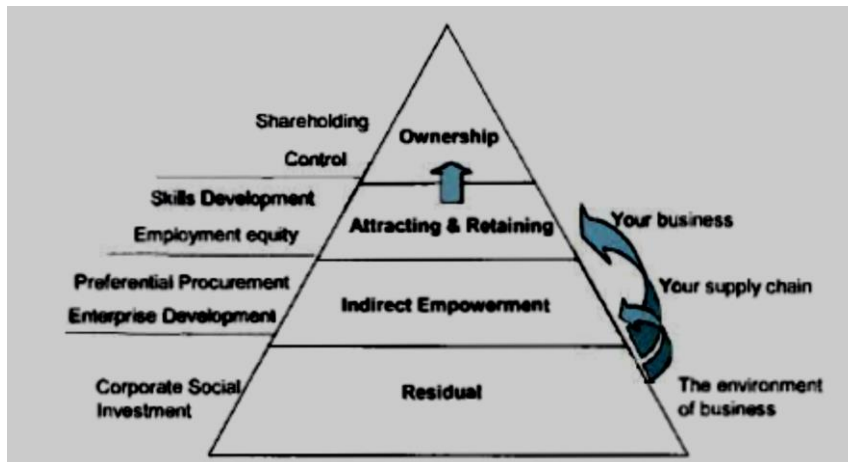
Lessons learnt and progress made

It is important that BBBEE policies should create and foster the sustainability of small and medium-sized businesses as they are an important engine of growth (Booyesen and Bouche, 2005: 46; Chabane, 2003: 7). According to Coetzee (2008: 139), the bulk of BBBEE ownership initiatives were funded by these businesses, demonstrating a commitment to the process.

It has become evident from historical BBBEE deals that it is of the utmost importance for any company that want to implement BBBEE, that the empowering partner should contribute towards the business in various ways not just financially or for the sake of getting contracts, the BBBEE deal should truly add value to the business (Booyesen and Bouche, 2005: 47). The second important aspect of getting the right empowerment partner is the issue of culture, it is important that the empowering partner’s culture is compatible or complimenting the business culture as this can ensure a sustainable working relationship (Maphisa, 2006: 78; Booyesen and Bouche, 2005: 47).

Dorrington (2006: 24) has developed a transformation triangle specifically for small and medium-sized businesses in an effort to assist these businesses in the transformation process. The triangle is set out below and indicates some steps that can be followed to ensure that small and medium-sized businesses comply with BBBEE requirements in all the different fields.

Figure 1: The transformation triangle



Source: Dorrington (2005: 24)

This triangle describes how businesses, who are undertaking BBBEE effectively, are contributing to the society in which they operate. For example businesses are contributing to society through Corporate Social Investment (scholarships for the family of your employees), they are supporting and enabling emerging businesses which is called Enterprise Development, they are encouraging their suppliers to transform with them which is called Preferential Procurement, they have good diversity at an employment level which is called Employment Equity, they give their employees the tools to do the job which is called Skills Development, and they have diversity of thought at Ownership and Management levels (Dorrington, 2006: 25).

As can be seen, when a company embraces the seven pillars of BBBEE, these seven areas impact on the people in our environment of business, on our supply chain, on our employees and therefore impact on all stakeholders in our country and not just a select few (Dorrington, 2006: 25).

Impact of BBBEE on family businesses

According to Balshaw (2004: 4), the single most strategic issue facing succession in a family business in South Africa is BBBEE. The cascade effect of empowerment will be felt up and

down the supplier chain and any business ignoring it would be ill-advised. Balshaw (2004: 5) continues by saying in order to stay competitive, family businesses need to change their profile. If they wish to continue to supply goods or services to the public sector, state and public entities bidders for public procurement, family businesses will be required to demonstrate their empowerment credentials in relationship to ownership, governance, management, human resource development and affirmative procurement - in line with government policies and legislation (Balshaw, 2004: 6).

The argument that BBBEE will play an ever increasing role in not just businesses in South Africa but also family businesses makes it one of the most important aspects to consider when dealing with succession planning of the family business (Orton, 2008: 100). The quest for a suitable BBBEE partner must be aimed to ensure some form of compatibility between the new empowerment partner and the values and goals of the family business (Booyesen and Bouche, 2005: 47).

Lennox (2004: 1) believes that BBBEE is just one of the new realities facing family businesses South Africa. The concept of equity is becoming a very sensitive issue. The problem family-owned businesses face is that they tend to have sentiment towards the businesses. Furthermore, the owners regard the assets and the pension funds as an extension of themselves. To meet the criteria of black empowerment policies, such businesses tend to feel they have to give away a part of themselves and they need to adopt a mindset that deals with BBBEE on a business levels and not in a sentimental context (Lennox, 2004: 1).

Government will use the total score card which include management, employment equity, skills development, preferential procurement and enterprise development to rank family businesses (Lennox, 2004: 1). Family businesses feel they would rather sell out than to lose the expertise. Lennox (2004: 1) says empowerment should be incentive-driven and not driven by legislation and concludes the article by saying that family-owned businesses need to construct their strategies around such realities.

Wadula (2003: 2) is of the opinion that family-owned businesses have limited options when it comes to attaining percentages of black ownership. Most of these businesses do not issue shares and some only have one or two shareholders. Most do not have Boards and cannot score under the management and control component of the scorecard. Wadula (2003: 2) wonders if these kinds of businesses should be measured against the same scorecard as listed companies or corporate.

RESEARCH METHODOLOGY

Constructing the questionnaire

The main objective of the questionnaire was to determine the attitude or perception of owner-managers of family businesses regarding the impact of BBBEE on family businesses. An attitude is a disposition towards a particular issue, the so-called attitudinal object, in this case the impact of BBBEE (Welman, Kruger and Mitchell, 2005: 156). In this study, a summated or Likert scale was therefore used to assess the attitude of owner-managers regarding the opportunities and threats of BBBEE on family businesses as well as the perceived impact of BBBEE on succession in family businesses.

By means of the questionnaire information was gathered regarding the demographics of the participating owner-managers and family businesses. The literature study provided, furthermore, valuable insight into the determinants of the impact of BBBEE on family businesses. A total of 45 items were identified to measure the perceived impact (opportunities, threats and succession).

The study population

The target population of this study was small and medium-sized family businesses in the Sedibeng district (Vaal Triangle) of South Africa. Numerous attempts were made to secure a database of family businesses in the Sedibeng district, but to no avail. Therefore, it was decided to use a convenience sample, by means of the snowball sampling technique, to identify the family businesses that participated in this study (Page and Meyer, 2000: 100).

To generate a preliminary list of family businesses, well-known business people were contacted in the district. These business people then acted as informants and identified potential family businesses for inclusion in the sample. The latter then identified a further set of family businesses. These referrals were subsequently contacted telephonically to confirm that they adhere to the definition of small and medium-sized family businesses used in this study (Ibrahim and Ellis, 2004: 5; National Small Business Amendment Act, 2004: 2; National Small Business Act, 1996) and to gauge their willingness to participate in the study. A list of 47 family businesses willing to participate in the study was compiled as a result of these efforts.

The sampling technique and methodology are consistent with that of other family business researchers who have been constrained by the lack of a national database on family

businesses (Eybers, 2010; Farrington, 2009; Van der Merwe and Ellis, 2007; Adendorff, 2004; Venter, 2003).

Data collection

The questionnaires were personally taken to the identified family businesses, ensuring effective lead times and portraying an image of appreciation for their participating in the study. The nature of the study compelled the researcher to focus on the perceptions of family business owner-managers therefore only one questionnaire was submitted to each family business. Each questionnaire was accompanied with a covering letter guaranteeing the confidentiality of their responses, and by offering to personally collect the completed forms participants were further encouraged to participate. A total of 31 usable questionnaires were returned before the cut-off date and were used for the statistical analysis of the data.

Statistical analysis

Demographical information of the participating owner-managers and the family businesses was gathered, analysed and presented in frequency tables. Furthermore, assessed the measuring instrument used in this study the opportunities and threats of BBBEE to family businesses and the impact of BBBEE on succession in family businesses on the basis of a 7-point Likert type scale ranging from Strongly Disagree (1) to Strongly Agree (7). In respect of each statement, subjects have to indicate the degree to which they agree or disagree on a certain statement (Welman *et al.*, 2005: 157; Huysamen, 1994: 125).

It is, according to Bless and Higson-Smith (1995: 130), important that researchers evaluate the measures or instruments that they use. This can be done by evaluating, amongst others, the reliability and construct validity of measures (Page and Meyer, 2000: 84). As a result of the very small sample used in this study, it was difficult to test the construct validity of the questionnaire by means of a factor analysis. The internal consistency reliability of the questionnaire was, however, assessed using Cronbach's (1951) alpha for each of the scales.

The questionnaires were statistically processed by the Statistical Consultation Services at the North-West University who used STATISTICA (Statsoft, 2008) to do the analysis. The main focus of the statistical analysis was based on the consistency between the different indicators of the questionnaire. The arithmetic mean, standard deviation and Cronbach alpha coefficient were used to interpret the results obtained.

RESULTS AND DISCUSSION

Demographic information of respondents

The demographic information of the participating owner-managers and family businesses is presented in Table 1.

Table 1: Demographic information of the sample

Variable	Frequency	Percentage (%)
Gender (n = 31)		
Male	28	90.32%
Female	3	9.68%
Age category (years) (n = 31)		
Younger than 29	2	6.45%
Between 30 and 39 years old	5	16.13%
Between 40 and 49 years old	8	25.81%
Between 50 and 59 years old	8	25.81%
Older than 60 years old	8	25.81%
Business size (permanent employees) (n = 31)		
Between 5 and 10 employees (very small business)	1	3.23%
Between 11 and 50 employees (small business)	25	80.65%
Between 51 and 200 employees (medium business)	5	16.13%
Business size (annual turnover (n = 31)		
Less than R5 million per year	5	16.13%
Between R5 million and R35 million per year	25	80.65%
More than R35 million per year	1	3.23%

The majority of the 31 participating owner-managers are male (90.32%) and only 9.68% female. Table 1 indicates that a total of 6.45% of the family business owners that participated in this study are younger than 29 years old, 16.13% are between 30 and 39 years, with an even distribution between the other three age groups (40 to 49, 50 to 59 and older than 60 years respectively) which represent 25.81% each.

A total of 3.23% of the 31 family businesses who participated in this study can be classified as micro and very small businesses in the South African context (10 employees and less) and 80.65% small businesses (between 11 and 50 permanent employees). The rest (16.13%) can be categorised as medium-sized businesses (51 to 200 employees).

A total of 16.13% of the businesses have an annual turnover of less than R5 million and are not legally required to comply with BBBEE legislation. The majority of businesses 54.84% have an annual turnover of between R10 million and R35 million, followed by 25.81% of the businesses with a turnover between R5 million and R10 million. Only 3.23% of the family businesses that participated in this study has an annual turnover exceeding R35 million.

Opportunities to the family business

The measuring instrument measured the perceived opportunities of BBBEE by means of a 15-point scale and the results are displayed in Table 2, with arithmetic mean = \bar{x} and standard deviation = s. The opportunities are ranked from the highest mean score (7 = strongly agree) to the lowest mean score (1 = strongly disagree).

Where Likert scale-type questions (where 1 = “Strongly disagree” and 7 = “Strongly agree”) are asked, relatively low numbers represent disagreement with the statement, while relatively high numbers represent agreement with the statement. A higher number thus suggests that the respondents perceived the statement as true. In the same way, a low number represents disagreement and suggests that the statement is perceived to be false.

Table 2: The results of the evaluation of the opportunities of BBBEE to family businesses

No.	Item	\bar{x}	s
	Average of all the items measuring the opportunities	3.84	0.98
B9	BBBEE makes it possible for the business to get access to contracts.	5.03	1.33
B2	BBBEE can result in the accusation of new customers for the business.	4.72	1.13
B8	BBBEE makes it possible for the business to compete in new unexplored markets.	4.61	1.54
B4	BBBEE makes it possible for the business to invest in affordable skills development for employees.	4.16	1.39
B10	Compliance to BBBEE makes it possible for the business to expand its business operations (higher growth).	4.06	1.46

B1	BBBEE creates new possibilities for the business in terms of business networks and new associates.	4.03	1.33
B6	BBBEE can help the business to achieve its social responsibility towards the community.	3.81	1.83
B7	BBBEE makes it possible for the business to be more competitive.	3.81	1.58
B3	BBBEE creates the opportunity for the business to improve its cash flow by means of a capital injection from the empowering partner.	3.74	1.75
B5	BBBEE can lead to new innovative ideas with the input of the empowering partner.	3.68	1.30
B13	Access to finance would be easier once the business comply with BBBEE requirements.	3.68	1.40
B14	BBBEE is the key to ensuring sustainable long term success.	3.35	1.68
B15	BBBEE creates new jobs.	3.35	1.62
B12	BBBEE can lead to more effective management styles within the business.	2.94	1.41
B11	BBBEE can give the business the opportunity to acquire materials cheaper as part of the preferential procurement process.	2.77	1.23

The average score of 3.84 for the construct *opportunities of BBBEE for family businesses* indicates that family business owners who participated in this study do not view BBBEE to be advantageous to their businesses. The statement, **BBBEE can give the business the opportunity to acquire materials cheaper as part of the preferential procurement process** ($\bar{x} = 2.77$), has the lowest average score. This indicates a very strong disagreement with the statement.

The statement, **BBBEE can lead to more effective management styles within the business** ($\bar{x} = 2.94$), also scored well below par. Two of the statements, **BBBEE creates new jobs** ($\bar{x} = 3.35$), and **BBBEE is the key to ensuring sustainable long term success** ($\bar{x} = 3.35$), scored equally low.

Five of the statements, **BBBEE creates new possibilities for the business in terms of business networks and new associates** ($\bar{x} = 4.03$), **compliance to BBBEE makes it possible for the business to expand its business operations** ($\bar{x} = 4.06$), **BBBEE makes it possible for the business to invest in affordable skills development for employees** ($\bar{x} = 4.16$), **BBBEE makes it possible for the business to compete in new**

unexplored markets (\bar{x} = 4.61), and **BBBEE can result in the accusation of new customers for the business** (\bar{x} = 4.72), were rated moderately true (score between 4.0 – 5.0) by participants.

The participating family business owners only rated one statement, **BBBEE makes it possible for the business to get access to contracts** (\bar{x} = 5.03) as “agree” in terms of the interpretation scale used.

Notice that the standard deviations of the different items range between 1.13 and 1.83 which are fairly high (on a 7-point scale). The variance in the different scores indicates that participants have different perceptions of the opportunities that BBBEE holds.

Threats to the family business

The perceptions regarding the threats to family businesses were obtained from 15 statements made on this topic (Table 3). The threats are ranked from the highest mean score (7 = strongly agree) to the lowest mean score (1 = strongly disagree).

Table 3: Results of the evaluation of the threats of BBBEE to family businesses

No.	Item	\bar{x}	s
	Average of all the items measuring the treats	5.49	0.70
C11	BBBEE will result in the business employing incompetent people just for the sake of empowerment.	6.32	0.79
C8	The ownership requirements of BBBEE will lead to the family losing control over the business.	6.03	0.89
C5	Adhering to the BBBEE act and codes of conduct put an administrative burden on the family business.	5.90	0.94
C12	BBBEE might lead to the deterioration of quality due to higher levels of authority being given to people that does not possess the necessary skills.	5.84	0.97
C1	BBBEE threatens the future existence of our family business.	5.81	1.51
C10	An empowering partner will change the culture of the business, resulting in conflict.	5.77	1.22
C13	Preferential procurement might force the business to buy from new suppliers, resulting in potential risks in terms of reliability.	5.77	0.84
C14	Established relationships with current suppliers will be at risk once the	5.71	0.97

	business has to buy from empowered suppliers.		
C7	Implementing BBBEE will be time consuming and can result in the neglect of existing customers.	5.48	0.93
C15	Quality control might deteriorate as new materials from new suppliers have to be used as part of the preferential procurement requirements.	5.48	1.03
C6	The BBBEE codes of good conduct are vague and complicated.	5.14	1.27
C9	The skills development aspect of BBBEE will lead to a loss in productivity as workers will need to attend courses.	5.06	1.55
C4	Implementing the codes of good conduct on BBBEE could result in the loss of focus on business matters and therefore could have a hampering effect on our family businesses.	4.94	1.44
C3	The management requirements of BBBEE might lead to retrenchments (job losses) within our family business.	4.68	1.64
C2	BBBEE might cause our family business to lose some of its existing customers.	4.45	1.77

The average *threats to the family business* score of 5.49 indicates that family business owners agree with the majority of statements made in this section, meaning that they, overall, perceived BBBEE as a threat to family businesses. The items, **BBBEE will results in the business employing incompetent people just for the sake of empowerment** (\bar{x} = 6.32), and **the ownership requirements of BBBEE will lead to the family losing control over the business** (\bar{x} = 6.03), strongly support these views.

Participants indicated that they strongly agree with the following items, **adhering to the BBBEE act and the codes of conduct put an administrative burden on the family business** (\bar{x} = 5.90), **BBBEE might lead to the deterioration of quality due to higher levels of authority being given to people that does not possess the necessary skills** (\bar{x} = 5.84), **BBBEE threatens the future existence of our family business** (\bar{x} = 5.81), **an empowering partner will change the culture of the business resulting in conflict** (\bar{x} = 5.77), **preferential procurement might force the business to buy from new suppliers, resulting in potential risks in term of reliability**, and **established relationships with current suppliers will be at risk once the business has to buy from empowered suppliers** (\bar{x} = 5.71).

Items that participants rated as “agree” (scores 5.0 – 5.50) are, **implementing BBEE will be time consuming and can result in the neglect of existing customers** (\bar{x} = 5.48), **quality control might deteriorate as new materials from new suppliers have to be used as part of the preferential procurement requirements** (\bar{x} = 5.48), **the BBEE codes of good conduct are vague and complicated** (\bar{x} = 5.14), and **the skills development aspect of BBEE will lead to a loss in productivity as workers will need to attend courses** (\bar{x} = 5.06).

Participants rated even the three lowest scoring items, **implementing the codes of good conduct on BBEE could result in the loss of focus on business matters and therefore could have a hampering effect on our family business** (\bar{x} = 4.94), **the management requirements of BBEE might lead to retrenchments (job losses) with our family business** (\bar{x} = 4.68), and **BBEE might cause our family business to lose some of its existing customers** (\bar{x} = 4.45) as moderate threats to their businesses. It is, therefore, evident that participants perceive the threats of BBEE to be one of the major issues surrounding this concept.

The large variance of the average standard deviation of the items in this section from 0.79 to 1.77 might be due to different perceptions from family business owners whose businesses operate in different industries.

Impact on management succession

This study also explored the issues surrounding the impact of BBEE on the succession process of family businesses. The impact of BBEE on succession comprised of 15 statements. The statements with their specific results obtained are being displayed in table 4, ranked from the highest mean score (7 = strongly agree) to the lowest mean score (1 = strongly disagree).

Table 4: Results of the evaluation of the impact of BBEE on management and ownership succession

No.	Item	\bar{x}	S
D3	The advice of an expert is important when structuring any BBEE deal.	6.13	1.26
D13	BBEE can lead to conflict of interest between the family and the empowering partner.	6.10	0.83

D4	The issue of BBBEE makes the succession planning of the business very difficult (more complex).	5.90	0.98
D5	With an empowering partner the management succession of the business becomes complicated.	5.90	0.75
D15	Decision making can become an obstacle as a result of BBBEE.	5.87	0.96
D14	BBBEE will result in a change from the traditional family management style.	5.84	1.00
D10	Family business owners will find it very difficult to ensure economic stability for future generations.	5.68	1.01
D2	The transfer of management from the senior to the younger generation will be troubled by BBBEE.	5.48	1.34
D6	Management succession planning is being delayed as a result of BBBEE.	5.48	1.15
D9	Family businesses will become distinct as a result of BBBEE.	5.45	1.61
D1	Implementing BBBEE will have an effect on the business' succession planning process.	5.32	1.42
D8	BBBEE will result in the family losing the business.	5.29	1.47
D12	BBBEE makes it impossible for the family business owner to make provision for his/her retirement.	5.03	1.45
D11	BBBEE might result in family business owners becoming obsolete in the day-to-day activities of the business.	4.45	1.36
D7	Once an empowering partner has entered the business, the ownership transition will be an easy process.	2.55	1.43

The item, **the advice of an expert is important when structuring any BBBEE deal** (\bar{x} = 6.13) obtained the highest rating of all the items that was assessed. The items that scored equally high are, **BBBEE can lead to conflict of interest between the family and the empowering partner** (\bar{x} = 6.10), **the issue of BBBEE makes the succession planning of the business very difficult (more complex)** (\bar{x} = 5.90), and **with an empowering partner the management succession of the business becomes complicated** (\bar{x} = 5.90), **decision-making can become an obstacle as a result of BBBEE** (\bar{x} = 5.87), **BBBEE will result in a change from the traditional family management style** (\bar{x} = 5.84).

The items, **family business owners will find it very difficult to ensure economic stability for future generations** ($\bar{x} = 5.68$), **the transfer of management from the senior to the younger generation will be troubled by BBBEE** ($\bar{x} = 5.48$), **management succession planning is being delayed as a result of BBBEE** ($\bar{x} = 5.48$), and **implementing BBBEE will have an effect on the business' succession planning** ($\bar{x} = 5.32$), still scored relatively high in overall terms of the questionnaire.

The following items, **family businesses will become distinct as a result of BBBEE** ($\bar{x} = 5.45$), **BBBEE will result in the family loosing the business** ($\bar{x} = 5.29$), and **BBBEE makes it impossible for the family business owner to make provision for his/her retirement** ($\bar{x} = 5.03$), reflect that family business owners agree that these statements are also relevant. Family business owner-managers also agree with the statement **BBBEE might result in family business owners becoming obsolete in the day-to-day activities of the business** ($\bar{x} = 4.45$).

The low score obtained for the item, **once an empowerment partner has entered the business, the ownership transition will be an easy process** ($\bar{x} = 2.55$), is a clear indication that family business owners view this statement as being untrue.

Reliability of the questionnaire

In order to assess the internal consistency between the items of the measuring questionnaire, Cronbach alpha coefficients were calculated (Page and Meyer 2000: 292) and are presented in Table 5.

Table 5: Reliability of measuring instrument

Factor	Cronbach alpha
Opportunities of BBBEE	0.869
Threats of BBBEE	0.779
Impact of BBBEE on family businesses	0.844

The Cronbach alpha coefficient is based on the average correlation of variables within a construct (SAS Institute 2005: 295; Cortina, 1993). The greater the Cronbach alpha coefficient is, the more reliable the scale. Nunnally and Bernstein (1994: 265) suggest that for acceptable reliability the Cronbach alpha coefficient should be greater than 0.7.

All 31 participants' responses were used to determine the reliability of the extracted factors (refer to Table 2). The results indicate that the questionnaire used in this study to measure the opportunities and threats of BBEE to family businesses, as well as the impact of BBEE on succession in family businesses, has acceptable reliability, with no factors with a Cronbach Alpha value below the customary cut-off value of 0.70 suggested for internal consistency (Nunnally and Bernstein 1994: 265).

CONCLUSIONS

Family business owners rated the opportunities of BBEE to family businesses as low. The general perception of family business owners is that BBEE does not have a great deal of opportunities to offer. However participants indicated the possibility of obtaining new contracts as the biggest opportunity of BBEE. This finding is confirmed by (Booyesen and Bouche, 2005: 45) in the literature review.

Business owners indicated that the employment of incompetent people just for the sake of empowerment is the biggest threat to family businesses. This fact was confirmed by the Janssens *et al.* (2006: 286). Another significant threat according to the participating family businesses is the fact that families might lose control of the business as part of BBEE. This is a view shared by Lennox (2004: 1). The threats mentioned above are just two of the most significant threats indicated by family business owners, therefore it can be concluded that family business owners are greatly concerned about the threats that BBEE holds for their businesses.

The results obtained from the empirical study indicate that family business owners are of the opinion that BBEE has a considerable impact on the management succession of their businesses. The consulting of expert advice when structuring a BBEE deal was indicated to be the most important aspect to consider when planning the succession process. Scroggin (2006: 25) confirms this finding. It can be concluded that family business owners definitely recognize the fact that BBEE will impact on the management succession of their businesses. Moreover family business owners deem it critical to obtain expert advice when structuring a BBEE deal.

The possibility of conflict of interest between the family and the empowering partner has proven to be the most noteworthy concern of family business owners. Another major concern is that BBEE will result in the dismay of traditional family management styles. In the literature review done earlier in this study these two aspects were indicted as major obstacles of the ownership succession planning of family businesses (Booyesen and Bouche,

2005: 47; Lennox 2004: 1). Therefore it is possible to conclude that family business owners are greatly concerned about the impact that an empowering partner will have on the traditional way the business has been operating and the possibility of conflict between family members and the empowering partner as a result of conflict of interest.

PRACTICAL RECOMMENDATIONS

The recommendations are based on the analysis that were done and the conclusions that were reached through the literature reviews and the empirical study. Family business owners who participated in this study identified certain indicators and sub-indicators that could be improved or altered in an attempt to decrease the impact of BBBEE on these businesses.

With these indicators in mind specific recommendations can be made to the Government in general, and the Department of Trade and Industry in particular. Recommendations will also be made to family businesses.

Recommendations to Government

The recommendation is that Government should investigate the possibility of tax incentives for businesses that create new jobs. This will encourage job creation and will therefore contribute towards addressing the unemployment situation in South Africa. It is furthermore suggested that Government should focus more on smaller empowerment deals, and not just giant corporate deals. Small and medium-sized businesses are the heartbeat of the economy and need more assistance from Government.

Government also needs to investigate ways to encourage organisations (including small and medium-sized businesses) to commit to skills development. The current incentives are not perceived to be advantageous to businesses and therefore businesses will not truly commit themselves to this issue. The entire country can benefit from a population with higher educational levels (which include skills development). Government should provide greater assistance in the process of financing a BBBEE deal. The focus should shift from corporate giants to qualifying small businesses. Government should re-investigate the screening committees, to ensure that fronting is kept at a minimum.

Recommendations to the Department of Trade and Industry (Dti)

The Dti needs to ensure that customer consultants that assist businesses with the process of BBBEE possess the needed skills and subject knowledge to assist customers effectively. The Dti should also expand its training programmes on the BBBEE. The DTI, furthermore, needs to investigate ways to simplify the interpretation of BBBEE requirements for qualifying

small enterprises. Businesses will be less reluctant to implement BBBEE if the process becomes less tedious. The DTI needs to re-visit the goals of BBBEE to establish if the generic scorecard effectively addresses these issues, with specific reference to small qualifying enterprises. A continued effort from the DTI is required to constantly assess the changing economic environment, to ensure that programmes and initiatives do not become outdated.

Recommendations to family businesses

The first question that family businesses have to answer is: Does BBBEE has an impact on their business? By answering this question family business owners will know how to structure the business strategy (with BBBEE in mind / or not). Family business owners should recognize the fact that BBBEE is a process that needs to be managed. It is thus important to make BBBEE part of their strategic planning process.

Business owners should view BBBEE in its totality and weigh the advantages and disadvantages. Family business owners often engage in empowerment activities just for the sake of empowerment. Getting an empowering partner is not necessarily the solution to long-term sustainability. They have to choose an empowering partner whose culture and personality will fit in with the business. It is advisable to identify a possible empowering partner through studying current suppliers or customers. This will reduce the possibility of future conflict due to a conflict of interest.

Getting expert advice on how to structure the BBBEE deal is also critical important. The process is complex and encompasses a number of different fields and family business owners run the risk of making tremendous mistakes by trying to facilitate the process on their own. The BBBEE act and codes of good conduct also allow for more ways to be BBE compliant such as skills development and doing business with BEE compliant businesses. Families should thus take into consideration that BBBEE should be a balanced approach. They should therefore make full use of other options based on the seven pillars (rather than only ownership) to be BBBEE compliant. An expert can help them a lot in this regard.

Family businesses should also not let the issue of BBBEE delay the management and ownership succession process. The future is uncertain and the best way to deal with the uncertainty is to be prepared. They should guard against the promises of prospective empowering partners in what they can contribute towards the business. Numerous businesses have fallen pray to empowering partners that offered empty promises.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The study attempted to make a contribution to the body of knowledge on the determinants of the impact of BBBEE on family businesses and can be regarded as a small step towards moving away from the current dependence on anecdotal evidence and case studies. This study, however, only assessed some of the aspects concerning BBBEE in family businesses in a very small sample and can be regarded as an exploratory study. More comprehensive research is still needed to gain more insight into the opportunities and threats of BBBEE to family businesses and in particular the impact of BBBEE on succession in family businesses.

A further limitation of this study is that as the result of the dynamic nature of economic empowerment to all South Africans and the interference by Government in black economic empowerment, it is very difficult to conduct scientific research on the topic and to make valid and useful recommendations to implement it. It is in a sense thus a moving target. More research on this topic is thus necessary to fully understand the implications of BBBEE to businesses in South Africa and family businesses in particular.

The study was only conducted in one district in South Africa (Sedibeng, formerly known as the Vaal Triangle) and due to the convenience sampling technique at a very small sample this cannot be considered to be representative of the perception of all small to medium-sized in South Africa. Care should therefore be exercised in the interpretation and utilisation of the results, and the findings of the study cannot be generalised. In other words, the typical small to medium-sized family business could be underrepresented in the sample.

The findings of this study were based only on descriptive, lower-level statistics. Further research is thus needed to gain more insight into the determinants of the impact of BBBEE on family businesses. It is recommended that more advanced statistical procedures, such as regression and factor analyses should be utilised in the further development of measuring instruments to scientifically assess the perceived impact of BBBEE on family businesses.

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**THE RELATION BETWEEN EMPLOYEE REMUNERATION GAPS AND LABOUR
PRODUCTIVITY: THE GAUTENG MANUFACTURING INDUSTRY AS A CASE STUDY**

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Keywords: Employee remuneration gap, labour productivity, employee remuneration gap-labour productivity (*ERGLP*) indicator coefficient, skill levels, employee characteristics, business/economic uncertainty

JEL classification: J30

ABSTRACT

The aim of the article is to determine the sign and the magnitude of the relation between employee remuneration gaps and labour productivity. The Gauteng manufacturing sector is used as a case study. This empirical research was deemed necessary, given the current important debate on the perceived impact and fairness of expanding employee remuneration gaps in the South African workplace. International studies on this particular topic have been conducted but very limited empirical research has been published regarding the South African situation.

A log-linear two-step ordinary least square estimation (OLS) was used to estimate the sign and magnitude of the relation between employee remuneration gaps and labour productivity. Employee remuneration gap-labour productivity (*ERGLP*) indicator coefficients were estimated for employee characteristics, skill levels and business/economic uncertainty. In terms of all the categories the signs of the *ERGLP* indicator coefficients were positive indicating a positive relation between employment remuneration gaps and labour productivity (at varying magnitudes). The squared *ERGLP* indicator coefficients confirm the existence of

diminishing marginal productivity characteristics after some optimal employee remuneration gap level.

It is recommended that given the unionised nature of the lower-skilled employee segment, greater labour productivity gains for organisations would stem from a more dispersed employee remuneration regime for the higher-skilled employee segment (albeit in a less uncertain business/economic environment).

Keywords: Employee remuneration gap, labour productivity, employee remuneration gap-labour productivity (*ERGLP*) indicator coefficient, skill levels, employee characteristics, business/economic uncertainty

JEL classification: J30

INTRODUCTION

The aim of the paper is to determine the sign and the magnitude of the link between employee remuneration gaps and labour productivity. There is currently an important debate in South Africa (employer organisations, labour unions, politicians etc) on the size and fairness of perceived employee remuneration gaps between the different employment levels in organisations. Labour unions in particular are of the opinion that these remuneration gaps are expanding and that it constitutes a major threat to job creation and the 'fair' distribution of income in the workplace and the economy as a whole. Employer organisations on the other hand argues that employee remuneration gaps are in main the result of shortages of higher skilled employees in the workplace and on differences in labour productivity levels between the different employee segments.

LITERATURE REVIEW

Positive or negative relation between employee remuneration gaps and labour productivity

There are mixed research results on the relation between employee remuneration gaps and labour productivity. There is one school of thought (Lazear and Rosen, 1981; Pfeffer and Langton, 1993; Milgram and Roberts, 1990; Eriksson, 1999 and Mahy, Rycx and Volral, 2009) that argues for the existence of a positive link between employee remuneration gaps and labour productivity. The greater the employee remuneration gap, the higher the level of labour productivity. Reasons given are i) that human effort is enhanced if a more differentiated remuneration structure is adopted (Lazear and Rosen, 1981) and ii) that high

levels of labour productivity are normally rewarded with higher remuneration structures (Milgram and Roberts, 1990). Bingley and Eriksson (2001); Martins (2008) and Mahy, Rycx and Volral (2009) are of the opinion that this positive relation between employee remuneration gaps and labour productivity is not infinite but it does adhere to some form of increasing and diminishing marginal productivity characteristics. The positive relation will reach some optimal level and with further increases in employee remuneration gaps the relation becomes negative. A study done by Winter-Ebner and Zweimuller (1999) indicates that the positive relation between employee remuneration gaps and labour productivity is more prevalent for production workers (so called 'blue collar' employees) than for managerial/administrative employees (so called 'white collar' employees).

The second school of thought (Akerlof and Yellen, 1988; Levine, 1991 and Hibbs and Locking, 2000) argues that there is a negative relation between employee remuneration gaps and labour productivity. Reasons for this negative relation are i) smaller remuneration gaps result in a greater level of employee cohesion and thus an improved level of labour productivity (Akerlof and Yellen, 1988 and Levine, 1991) ii) 'fairness' in the sense that if employees feel that their real remuneration are less than what he/she defines as a fair remuneration package, labour productivity would decrease (Akerlof and Yellen, 1988) and iii) that the variation in labour productivity necessitates a less dispersed employee remuneration distribution (Hibbs and Locking, 2000).

Impact of employee characteristics, differences in skill levels and the level of uncertainty in the business/economic environment on the relation between employee remuneration gaps and labour productivity

Irrespective of whether the relation between employee remuneration gaps and labour productivity is positive or negative, all the research findings clearly indicates three important aspects that need to be considered namely i) employee characteristics ii) the difference in skill levels of employee segments and iii) the level of uncertainty in the business/economic environment in which a particular employer operates. Pfeffer and Langton (1993) indicated that employee characteristics must be taken into consideration and that the link between employee remuneration gaps and labour productivity will depend on an employee's position in the remuneration structure. Jirjahn and Kraft (2007) reported that the labour relations regime and the kind of incentive schemes play an important role in determining the sign and the magnitude of the link between employee remuneration gaps and labour productivity. It is also argued that i) differences in the size of organisations and the kind of ownership (Beaumont and Harris, 2003) and ii) the kind of management regime (Belfield and Marsden, 2003) will also impact on the relation between employee remuneration gaps and labour

productivity. Lazear (1995) came to a very interesting conclusion in which he argued that i) remuneration regimes of employers should be tailored to take into account the characteristics of their workforce and ii) that less dispersed employee remuneration gaps are preferable at management level.

In terms of skill levels Milgram and Roberts (1990) and Lallermond (2007) indicated that smaller remuneration gaps are required for higher skilled employees if labour productivity is to be enhanced. Prendergast (2002) and Heyman (2005) on the other hand came to the conclusion that the relationship between remuneration gaps and labour productivity is stronger the more skilled the employee is. The reason given is that the remuneration regime for higher skilled employees are linked to firm performance and that more dispersed employee remuneration gaps would induce these employees to act in an optimal manner (higher levels of productivity). Foss and Laursen (2005) and Mahy, Rycx and Volral (2009) indicated that employee remuneration gaps for less skilled workers should be smaller as limited performance-linked regimes are needed to enhance labour productivity.

Uncertainty in the business/economic environment will impact on the sign and the magnitude of the link between employee remuneration gaps and labour productivity. Prendergast (2002) and Lazear (1995) both stated the existence of a positive relation between uncertainty and the dispersion of employee remuneration gaps. The basic argument is that performance-linked remuneration (which entails more dispersed remuneration gaps) regimes are more prominent when business/economic uncertainty is high. Pfeffer and Langton (1993) on the other hand argued that in a highly uncertain business/economic environment the link between employee remuneration gaps and labour productivity should be weaker simply because of the fact that performance-linked remuneration regimes are viewed as unfair by employees (they have less control over their own labour-output relation).

RESEARCH DESIGN

Research approach and method

The research design comprises of three distinct steps. Firstly, a suitable econometric model needs to be specified in order to capture all the variables that would impact on the sign and magnitude of the link between employee remuneration gaps and labour productivity. Secondly, the correct sample of organisations in the South African manufacturing industry need to be determined and the required data needs to be collected from this sample (after which the data needs to be statistically and econometrically calibrated). The last step entails

the econometric estimation of the relation between employee remuneration gaps and labour productivity.

Model specification

In a study on the impact of wage dispersion on firm productivity in Belgium firms Mahy, Rycx and Volral (2009) used the Winter-Ebmer and Zweimuller (1999) model. The major contribution of the Mahy, Rycx and Volral study (2009) is the empirical estimation of the effect of firm uncertainty on wage dispersion. The estimation procedure that Mahy, Rycx and Volral (2009: 5-11) have used, were extensively applied in this particular study. The model and the required data were adapted to meet South African conditions and then used to estimate the sign and magnitude of the relation between employee remuneration gaps and labour productivity. The model is specified in such a manner that the South African characteristics of the employees (such as age, sex, job description, union affiliation and employee category), the different skill levels and business/economic uncertainty (the net operating surplus of organisations is taken as the estimator) are taken into consideration. The relation between employee remuneration gaps and labour productivity is thus a conditional one. In technical terms the model would estimate a conditional employee remuneration gap-labour productivity indicator coefficient (hereafter referred to as the *ERGLP* indicator coefficient). The specification of the model would allow for the estimation of the *ERGLP* indicator coefficient between similar and different employee categories (characteristics and skill levels) and for the different business/economic uncertainty levels.

The model is basically a two-step ordinary least square estimation (OLS). The first step pertains to the estimation of the relation between employee characteristics and the average monthly remuneration per employee. A log-linear estimation of the average monthly remuneration based on employee characteristics is performed. This is done for each organisation in the sample group.

$$\ln r_{nm} = \beta_0 + c_{nm}\beta_1 + \epsilon_{nm} \dots\dots\dots(\text{equation 1})$$

In equation (1) r_{nm} denotes the average monthly remuneration of employee n in organisation m , c_{nm} represents the vector that concerns employee and skills characteristics and ϵ_{nm} is simply the error term.

The second step involves the specification of the labour productivity equation. In order to estimate this productivity equation the standard deviations of the estimated residuals of all

the regressions done in step 1 are used as a measure of the employee remuneration gap dispersion.

$$\ln \text{prod}_m = \alpha_0 + \alpha_1 \sigma_m + (\alpha_2 \sigma_m^2) + x_m \alpha_3 + z_m \alpha_4 + v_m \dots \dots \dots (\text{equation 2})$$

In equation (2) prod_m represents the average labour productivity of organisation m (\ln of the value added per employee is used as a proxy for $\ln \text{prod}_m$), σ_m is the *ERGLP* indicator coefficient (it is also specified in quadratic format simply to test for increasing and diminishing marginal productivity characteristics), x_m is the aggregated employee characteristics of firm m , z_m contains information on business/economic uncertainty (variations in net operating surplus is used as the proxy) and v_m is simply the error term.

Equation (2) is separately run for each organisation. In order to cater for multi-collinearity, equation (2) is estimated with the log of the value added per employee (defined as operating surplus / number of employees) for n -years instead of $n-1$ years. The assumption is that the value added of year n does not influence the remuneration structure of year $n-1$.

The results of three final estimations will be reported. The first estimation concerns the general specification in which the *ERGLP* indicator coefficient is estimated on the basis that all the employee characteristics are (in an econometric sense of the word) controlled. In the second estimation the *ERGLP* indicator coefficients are specifically estimated for the magnitude of the different skill levels (higher-skilled and lower-skilled employees). In the third estimation the *ERGLP* indicator coefficient is specifically estimated for the level of business/economic uncertainty.

Data collection process

The data collection process was executed in three stages. In the first stage the data required by the model specification was identified (the results of the literature study was of the utmost importance in this regard). In the second stage the sample group of organisations needed to collect the data from, was established and statistically validated (more specifically the required size of the sample group). In the third stage the data collected from the sample group was econometrically calibrated in order to derive detailed and correct data.

As was the case with the Mahy, Rycx and Volral study (2009), the International Standard Classification of Occupations (ISCO-88) was used. The category A classification consists of senior officials & managers, professionals & associate professionals, technicians, clerks, service workers and shop & market sales workers (for the purpose of this study this category

will be referred to as the more skilled employee segment). The category B classification consists of craft & related trade workers, plant & machine operators & assemblers and elementary occupations (for the purpose of this study this category will be referred to as the less skilled employee segment). Data on i) the size of the workforce per organisation and the % size of each category (A & B) per organisation was collected.

For employee characteristics, skill levels and employee remuneration, data on i) age ii) sex (% male and % female), training/education levels iii) union affiliation iv) tenure and gross monthly employee remuneration was collected. For training/educational levels the following three categories were identified namely i) lower secondary (grade 9 and lower) ii) upper secondary (grades 10 – 12) and iii) tertiary education. It is also important to note that the gross remuneration of hourly-paid employees was converted into a gross monthly remuneration equivalent.

Data on the operating surplus (and the variation thereof) of each organisation in the sample group, both for 2007 and 2008, needed to be collected i) as an indicator of business/economic uncertainty (greater variation of the operating surplus reflects greater uncertainty) and ii) in order to calculate the annual value added per employee.

Given the significant size of the manufacturing industry in Gauteng (relative to the manufacturing sectors of other provinces in South Africa) it was decided to sample a representative number of all kinds of manufacturing firms located in the Gauteng province. The list of all manufacturing companies in Gauteng, with their contact details, was obtained from the Manufacturing, Engineering and Related Services SETA (hereafter referred to as MERSET). It was also the aim of the data collection process to make sure that a spread of firms throughout the different segments of the manufacturing industry was included. It is also important to note that as a result of the large number of required data observations it was decided to include only firms that have more than 150 employees. The sample size based on the aforementioned constraint and the statistical validation was 209 firms. The response rate was excellent and 192 firms responded and supplied the required data. The mean values (the standard deviations S_D are indicated in brackets) of the data collected on the estimation variables are i) size of the firm: 225.71(S_D 182.93) employees ii) category A employees: 40.88% (S_D 19.87) iii) category B employees: 59.12% (S_D 39.12) iv) age: 31.12 (S_D 3.25) years v) percentage male: 63.78% (S_D 28.22) & percentage female: 36.22% (S_D 31.15) percent vi) lower secondary educated employees: 42.25% (S_D 36.21), upper secondary educated employees: 40.65% (S_D 32.58) & tertiary education: 17.10% (S_D 14.11)

vii) gross monthly wage: R7424 (S_D893) and viii) the annual value added per employee: R758 385 ($S_D243567$).

THE ESTIMATION RESULTS

In terms of the *general specification* the *ERGLP* indicator coefficient was 2923.80 (0.82) and the squared *ERGLP* indicator coefficient -3317.11 (2.1). (The standard errors are shown in brackets, the results are significant at a 5% confidence level and the adjusted R^2 was 0.61. The positive sign and the magnitude of the *ERGLP* indicator coefficient is clear prove of a significant positive relation between employee remuneration gaps and labour productivity for the sample group. The negative sign of the squared *ERGLP* indicator coefficient confirms the existence of diminishing marginal labour productivity beyond some optimal level of employee remuneration gaps. This simply means that excessive employee remuneration gaps would be harmful to labour productivity gains. In order to cater for the possibility of multi-collinearity in the *general specification* a one-period lead was introduced into the OLS estimation. The resultant *ERGLP* indicator coefficient of 2743.56 (1.03) and the squared *ERGLP* indicator coefficient of -2987.11(2.42) again confirmed the significant positive relation between employee remuneration gaps and labour productivity as well as the existence of diminishing labour productivity characteristics beyond some optimal level of employee remuneration gap dispersion.

In the second estimation the *ERGLP* indicator coefficient was estimated for the different skill levels. As indicated previously category A is assumed as the more skilled employee segment and category B as the less skilled employee segment. These two skill categories were further sub-divided into large and small sub-categories. The aim was simply to determine if the *ERGLP* indicator coefficient differs for i) organisation that have a large component of lower-skilled employees versus those organisations that have a small component of lower-skilled employees and ii) organisations that have a large component of higher-skilled employees versus those organisations that have a small component of higher-skilled employees. In order to differentiate between the large and small components the mean values were used. The small component is defined as less than the mean and the large component as greater than the mean. The estimated *ERGLP* indicator coefficients are listed in Table 1.

Table 1: *ERGLP* indicator coefficients for the different skill levels

Category	<i>ERGLP</i> indicator coefficient	Squared <i>ERGLP</i> indicator coefficient
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Lower-skilled/large	+1720 (0.89)	-6170 (2.51)
Lower-skilled/small	+1911 (1.74)	-8350 (3.43)
Higher-skilled/large	5430 (1.73)	-8120 (3.24)
Higher-skilled/small	2950 (0.81)	-4730 (1.73)

***The standard errors are listed in brackets, the results are significant at 5% confidence level and the adjusted R² was 0.62)**

Source: Own estimations

The negative squared *ERGLP* indicator coefficient estimates of all the different categories suggest strong diminishing marginal labour productivity characteristics. Excessive employee remuneration gaps (after some optimal employee remuneration gap level) will have a strong negative effect on labour productivity should the remuneration gap dispersion go beyond that optimal level. This applies to both lower-skilled and higher-skilled employees. It is also interesting to note that the magnitude of the positive relation between employee remuneration gaps and labour productivity is higher for higher-skilled employees in comparison to lower-skilled employees. It is especially very high in the higher-skilled/large employee segment. This result is a plausible confirmation that performance-linked remuneration regimes for the higher-skilled employee segment have a strong positive impact on labour productivity. Finally, it is also interesting to note that the positive *ERGLP* indicator coefficient estimates for the lower-skilled/large and lower-skilled/small components are very similar meaning that the relative magnitude of the positive link between employee remuneration gaps and labour productivity is the same irrespective of the size of the lower-skilled employee component.

Lastly, *ERGLP* indicator coefficients were estimated for the impact of business/economic uncertainty (measured as variations in operating surplus). It was decided to differentiate between high levels of uncertainty and low levels of uncertainty. The differentiation between these two sub-categories was based on the mean value of the variation in operating surplus. Low-risk was defined as variation in operating surplus that falls below the mean value and high-risk was defined as the variation in operating surplus that falls above the mean value. The estimated *ERGLP* and squared *ERGLP* indicator coefficients are listed in Table 2.

Table 2: *ERGLP* indicator coefficients for the different levels of business/economic uncertainty

Category	<i>ERGLP</i> indicator coefficient	Squared <i>ERGLP</i> indicator coefficient
High uncertainty	+3718 (0.93)	-4968 (2.77)
Low uncertainty	+4221 (1.36)	-5111 (2.45)

***The standard errors are listed in brackets, the results are significant at 5% confidence level and the adjusted R² was 0.65)**

Source: Own estimations

The results are quite interesting in the sense that the *ERGLP* indicator coefficient is greater in a low uncertain environment when compared to the highly uncertain environment. It simply relates to a stronger positive link between employee remuneration gaps and labour productivity in a more certain business/economic environment. A plausible reason for this is that performance-linked regimes seem to impact less on employee effort in a highly uncertain business/economic environment because employees might feel that they have less control over their effort-output relation. Irrespective of the level of business/economic uncertainty, the negative sign and the magnitude of both the squared *ERGLP* indicator coefficients show a strong diminishing marginal labour productivity characteristic beyond some optimal employee remuneration gap level.

IMPLICATIONS FOR MANAGEMENT

The results of the study confirm the existence of a positive relation between employee remuneration gaps and labour productivity but with the provision that this positive relation is not infinite (this is in line with the results of the Bingle and Errikson (2001) and Martins (2008) and Mahy, Rycx and Volral (2009) studies). After some optimal employee remuneration gap level diminishing marginal labour productivity characteristics kicks in and the relation becomes negative. These findings apply to all the various differentiations in employee characteristics, different skill levels and the nature of the business/economic uncertainty levels. The results also support the findings of the Lazear and Rosen (1981) and Mahy, Rycx and Volral (2009) studies in which it was indicated that employee effort could be enhanced if a more differentiated remuneration regime (performance-linked) is adopted. This is especially true for the higher-skilled employee component.

It is interesting to note that employee remuneration gap dispersion impact on labour productivity is less in the lower-skilled employee segment compared to the higher-skilled employee segment. A plausible reason for this might be that the lower-skilled segment is much more unionised than the higher-skilled segment. This is also underpinned by the fact that i) the magnitude of the *ERGLP* indicator coefficients are very similar for the two sub-sections (large and small) of the lower-skilled employee segment and ii) that the magnitude of the *ERGLP* indicator coefficients are much stronger for the higher-skilled employee segment when compared to the lower-skilled employee segment. This particular finding (ii) is in contrast with the results of the Winter-Ebner and Zweimuller (1999) study but it rather supports the results of the Prendergast (2002); Heyman (2005) and Mahy, Rycx and Volral (2009) studies.

In terms of the impact of business/economic uncertainty the results of this study supports the conclusion of the Pfeffer and Langton (1993) and Mahy, Rycx and Volral (2009) studies in which it was indicated that the positive relation between employee remuneration gaps and labour productivity is weaker in a highly uncertain business/economic environment (underpinned by the fact that the *ERGLP* indicator coefficient is smaller in a more uncertain business/economic environment).

The results of this study could support the point of view that given the unionised nature of the lower-skilled employee segment, greater labour productivity gains for organisations would stem from a more dispersed employee remuneration gap regime for the higher-skilled employee segment (albeit in a less uncertain business/economic environment).

CONCLUSION

The results of this study support the school of thought that there is a definite positive relation between employee remuneration gaps and labour productivity when employee characteristics, skill levels and business/economic uncertainty are considered. The study also confirms the point of view that this positive relation is not infinite and that after some optimal employee remuneration gap level the relationship will become negative (characteristics of diminishing marginal labour productivity becomes dominant).

The fact that the *ERGLP* indicator coefficients are smaller for the lower-skilled employee segment when compared to the higher-skilled employee segment, is a clear indication of i) the unionised nature of the lower-skilled employee segment and ii) possible effective performance-linked employee remuneration regimes for the higher-skilled employee segment.

The outcomes of the study also support the point of view that the positive relation between employee remuneration gaps and labour productivity would be more prominent for the higher-skilled employee segment in a less uncertain business/economic environment. A more uncertain business/economic environment would lower the magnitude of this positive relation (as indicated by a lower *ERGLP* indicator coefficient).

Finally, the results of the study would support the point of view that greater labour productivity gains would be generated in a more dispersed employee remuneration regime for the higher-skilled employee segment. The pre-requisite for this point of view is a less uncertain business/economic environment.

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AN EXPLORATORY STUDY OF THE FACTORS INFLUENCING NON-FAMILY EMPLOYEE COMMITMENT TO THE FAMILY BUSINESS

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ABSTRACT

Non-family employees are important contributors to family businesses. They add to the family's pool of resources and have the ability to view the business from a more unemotional and objective perspective. Many family businesses employ a larger number of non-family employees than family members, and gaining their commitment and inspiring them to go beyond the call of duty is critical to the survival and success of family businesses.

The primary objective of this study is to identify the most pertinent factors that influence non-family employee commitment to the family business. In order to address the primary objective, semi-structured personal interviews were conducted with a sample of 9 non-family employees from three family businesses in the Nelson Mandela Metropole. Data analysis was undertaken by applying Tesch's model (1990) in De Vos (1998) as the framework for the process of content analysis.

The empirical results of this study reveal that the following factors have the greatest impact on non-family employee commitment to the family business: *Leadership; Autonomy; Opportunities for career growth and development; Open communication; Supervisory support and concern for employees; Fairness; Involvement in decision-making; Committed family members; Shared values; Feedback and recognition; Personalised interaction; Access to ownership shares; and Clarity concerning succession issues.*

It is evident from this study that non-family employees play a pivotal role in contributing to the successful functioning of family businesses. It is thus essential for family business leaders to place an emphasis on nurturing their relationships with, and on harnessing the commitment of, their non-family employees.

INTRODUCTION AND PROBLEM STATEMENT

Family businesses range from small and medium-sized businesses to large multinational corporations (Abouzaid, 2008: 11; Cadbury, 2000: 1; Tetteh, 2008: 1). Together they account for well over half of all existing and newly created jobs, and in many cases entire communities depend on the continued existence of a family business (Reid, Dunn, Cromie and Adams, 1999: 64). In South Africa, family-owned businesses are growing in importance. They make up about 80% of South Africa's businesses, and constitute an impressive 60% of companies listed on the Johannesburg Securities Exchange (Growing family businesses into professional companies, 2009). This is pertinent since South Africa is characterised by high unemployment levels. This unemployment problem in South Africa is exacerbated by the impact of the current global financial crisis, in which hundreds of thousands of employees have been laid off. It is thus especially essential to ensure the creation, growth and prosperity of family businesses in South Africa when one considers the crucial role they play in employment creation (Abouzaid, 2008: 11; Cadbury, 2000: 1; Goffee, 1996: 36; Maas and Diederichs, 2007: 4; Tetteh, 2008: 1).

Despite their increasing importance in global economies, a major shortcoming of family businesses is their high failure rate. According to Tetteh (2008: 2), the average lifespan of a family business is 24 years, with smaller family businesses being particularly vulnerable. In general, smaller family businesses survive for only 5 to 10 years. Reid, Morrow, Kelly and McCartan (2002: 249) suggest that the high failure rate of family businesses may in part be attributed to limited organisational capability. Organisational capability is defined by Tetteh (2008: 4) as "the ability to generate commitment from the human assets in the organisation". According to the organisational commitment literature, the positive outcomes of employee commitment to the firm include, amongst others, lower employee turnover, enhanced firm

performance, greater profits and enhanced long-term survival prospects (Sharma and Irving, 2005: 25; Vallejo, 2008).

Much of the family business literature has focused on the antecedents and consequences of *family member* commitment to the family business. The existence of high levels of family member commitment and loyalty to the family business is widely regarded as one of the key advantages of family businesses compared to their non-family counterparts (Vallejo, 2008). But what about the commitment of the non-family members of the family business? Do these employees differ in their level of commitment from employees of non-family firms? If they do, what factors influence their level of commitment to the family business, and how can this affect the business in terms of performance, profitability and long-term survival prospects? A review of the current family business literature fails to resolve these questions. According to Sharma (n.d.), family business leaders regard gaining the commitment of their non-family employees as one of their highest priorities. Despite this, surprisingly little attention has been and is being dedicated to these integral stakeholders in family businesses. As a consequence, more research needs to be directed towards understanding the elements that influence non-family employee commitment to the family business.

PRIMARY OBJECTIVES

The primary objective of this study is to identify the factors that influence non-family employee commitment to the family business. In other words, this research will focus on how the dynamics unique to the family business impact on non-family employee perceptions and how these perceptions in turn influence the level of non-family employee commitment to the family business.

THEORETICAL OVERVIEW

Family businesses differ from their non-family counterparts in that there is a unique interaction between two separate, not necessarily compatible social systems: the family and the business (Goffee, 1996: 36; Sundaramurthy and Kreiner, 2008: 415). The integration of the family and business systems increases the complexity of organisational and management issues, particularly with regard to human resource management (HRM) issues in family businesses (Reid *et al.*, 2002: 249). According to Barnett and Kellermanns (2006), one of the biggest challenges family businesses face in terms of HRM, is the effective management of non-family employees.

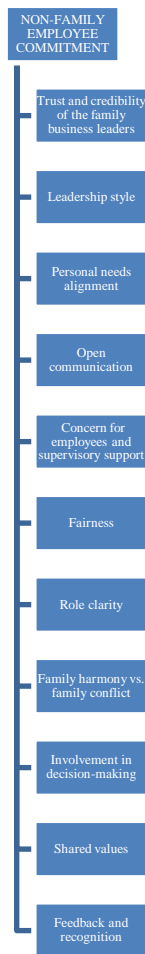
Non-family employees represent a large percentage of labour costs and are important contributors to the family business. Family businesses often need to turn to non-family

executives in order to fill the inevitable gaps that exist in the family's skills and resource base (Balshaw, 2003: 137; Ong, 2008: 2). In addition, they add balance to the family business because they are able to view the business from an unemotional and more objective position (Balshaw, 2003: 137; Indalecio, 2009). It is thus essential for family business leaders to successfully manage their non-family employees and to place an emphasis on gaining their commitment. In addition, building long-term, mutually beneficial relationships with such employees, as a means of establishing a competitive advantage (Reid and Adams, 2001: 311), is of vital importance.

It is important to understand, however, that commitment to the business does not mean the same to all employees. Non-family employees have different needs and expectations, and the factors that enhance commitment levels in one group of employees may have no significance for another group. It is therefore important for family business leaders to first develop an understanding of non-family employees' needs and expectations in order to establish the factors that are most important to such employees. The greater the extent to which the family business leaders can understand and satisfy the needs of their non-family employees, the greater will be their determination and commitment to work towards ensuring the success of the family business (Sangeetha, 2007).

Based on the existing body of knowledge on family business dynamics and their HRM practices, as well as the literature on organisational behaviour and organisational commitment, 11 factors were identified as being most influential in determining the commitment levels of non-family employees. These factors were integrated into a proposed conceptual model (Figure 1) in order to be empirically tested among a sample of non-family employees working in family businesses.

FIGURE 1: A PROPOSED CONCEPTUAL MODEL OF THE FACTORS INFLUENCING NON-FAMILY EMPLOYEES' COMMITMENT TO THE FAMILY BUSINESS



The remainder of the theoretical overview is devoted to discussing each of the factors identified in Figure 1, as well as their importance in stimulating the commitment of non-family employees.

Trust and credibility of the family business leaders

According to Ong (2008: 4), for non-family employees to feel part of the family business, trust needs to be established. The trust and credibility of the leaders may strengthen employees' feelings of emotional support, and can promote employees' self-esteem and identification with the organisation (Astrachan and Zellweger, 2008: 17; Rego and Cunha, 2006: 6-7). On the other hand, lack of leader credibility and trustworthiness can be a source of psychological distress for employees and can lead to lower employee morale (Rego and Cunha, 2006: 19).

Leadership style

Leadership style has been shown to influence employee commitment. In particular, Yiing and Ahmad (2009: 56-57) have reported participative or consultative leadership styles to have a higher positive correlation with employees' job satisfaction and commitment compared to a more structured or task-oriented leadership style. Employees who perceive their leaders as adopting consultative or participative behaviours are more satisfied with their jobs, are more committed, and thus perform better (Yiing and Ahmad, 2009: 58).

Personal needs alignment

In order to increase the commitment of employees, it is essential for their personal needs and career goals to be closely aligned with the opportunities available in the business. Research has shown that potential employees who perceive their career interests to be closely aligned with the opportunities available in the family business, "exhibit a keen desire to pursue a career in these firms and devote their energies to making a positive contribution" to them (Sharma and Irving, 2005: 21). Specifically, employees who perceive opportunities for learning and personal development may find their jobs to be intrinsically rewarding and meaningful. Such employees are thus likely to invest more cognitive and emotional resources in their work and feel a greater sense of empowerment and identification with their work roles. Opportunities for learning and personal development also enable employees to develop a stronger sense of job competence and autonomy, leading to higher affective well-being (Rego and Cunha, 2006: 6-8).

On the other hand, Coetzee (2005) pointed out that employees who are given mundane, repetitive tasks and are overly constrained by bureaucratic rules and procedures are likely to be markedly less committed.

In the context of family businesses, opportunities for learning and personal development are often considered to be limited for non-family employees. Non-family employees' career paths may be restricted since often the top management positions are filled by family members. This can lead to feelings of exclusion on the part of non-family members and thus result in higher employee turnover and lower commitment (Devries, 2007: 42; Reid *et al.*, 1999: 56).

Open communication

For employees to be committed to the organisation in which they are employed, open and regular two-way communication should exist. A lack thereof can lead to misunderstandings and lower employee morale. There needs to be open disclosure of information concerning the strategy and performance of the business as well as feedback on individual performance

(Rego and Cunha, 2006: 19-20). Communication is especially important in family businesses since family members and non-family members can often differ in their views and expectations of how the business should be run (Ong, 2008: 4). In addition, familial complications and complexities can create ambiguity and anxiety for non-family members and lead to misunderstanding and resentment. For this reason family business leaders need to adopt open-door policies and allow non-family members to freely express any concerns they may have (Devries, 2007: 42).

Concern for employees and supervisory support

The level of organisational and managerial support felt by an employee directly impacts on his/her level of commitment (Yiing and Ahmad, 2009: 56). Employees need to feel respected as human beings and not regarded just as “resources” (Rego and Cunha, 2006: 19). Employees, who perceive their organisations as having their best interests at heart and being supportive of them, are more likely to reciprocate in beneficial ways and be willing to go beyond the call of duty (Coetzee, 2005).

Family businesses are often characterised by an organisational culture that is highly concerned with acting in the best interests of its employees. Family business leaders are considered to be more concerned for their employees’ wellbeing, and supportive of them, than the leaders of non-family businesses. In addition, highly personalised relationships often develop between family business leaders and their employees. Such personalised interaction can strengthen a non-family employee’s emotional bond to the business and may serve as a powerful motivator to produce positive work attitudes, a sense of loyalty to the firm and a determination to contribute towards the successful functioning of the family business (Astrachan and Zellweger, 2008: 19; Cadbury, 2000: 6-7; Lee, Gang and Lee, 2008).

Fairness

Issues of fairness and justice appear to be elevated in family businesses owing to the integration of family and business identities. In family businesses, where a high degree of family influence exists, non-family employees are often treated unfairly because family members are given preferential treatment in terms of compensation, bonuses and career advancement in the business (Barnett and Kellermanns, 2006). When non-family employees are not compensated according to their contribution towards the business, perceptions of injustice are formed, which cause tension and conflict to develop between non-family employees and the family business leaders (Venter, Farrington and Boshoff, 2009:6). Family business leaders therefore need to make a concerted effort to ensure the fair treatment of

non-family employees, the benefits of which are increased job satisfaction, improved interpersonal relationships between employee and employer, higher employee commitment; and thus enhanced business performance (Coetzee, 2005).

Role clarity

It is important that from the beginning of the employment contract, both family business owner-managers and non-family employees be explicit about the expectations that they have of each other. This will help to prevent ambiguity and the risk of misunderstandings. If an employee's job description is not clearly explained, expectations regarding role requirements and responsibilities are uncertain. Consequently it will be harder for an employee to be confident and enjoy his/her work (Scott, 2008). Family business leaders need to ensure that there is understanding and clarity regarding the roles and responsibilities of each employee in the business, and that there are clear lines of reporting and authority.

In addition to ensuring the provision of clear roles and responsibilities, it is important to ensure that non-family employees are placed in positions that take advantage of their strengths and that provide them with a sense of autonomy, empowerment and job challenge. Only when these conditions are met will employees be committed and motivated to excel (Sangeetha, 2007).

Family harmony vs. Family conflict

Harmony among family members creates stability in the family unit and contributes to a sense of team spirit, both of which are necessary prerequisites for engendering non-family employee commitment (Indalecio, 2009; Venter *et al.*, 2009: 7). Conversely, excessive family conflict can be a significant deterrent to non-family employee commitment. When family conflicts emerge, non-family members can often be caught in the crossfire and may feel obliged to choose sides. Such family conflict can promote a hostile work environment and elicit high levels of anxiety on the part of the non-family members (Devries, 2007: 42; Indalecio, 2009).

Involvement in decision-making

Harris, Reid and McAdam (2004: 50) argue that it is essential to sufficiently involve employees in decision-making processes as this has been found to increase employee commitment, responsibility and effort, which ultimately enhance firm performance.

In family businesses, the degree of family influence has a direct bearing on the level of non-family employee involvement. Family businesses which are characterised by a high degree

of family influence tend to be rather rigid, and will centralise decision-making among family members (Reid *et al.*, 1999: 56). In such businesses, family members may also find it difficult to delegate crucial responsibilities to non-family employees, thereby diminishing non-family members' sense of autonomy and personal control (Devries, 2007: 42; Reid *et al.*, 1999: 56). Excluding non-family employees from key decisions and processes will lead them to feel unvalued, and this could dampen their morale and diminish their commitment to the business (Devries, 2007: 42; Harris *et al.*, 2004: 49; Ong, 2008: 7-11; Reid *et al.*, 1999: 56).

Shared values

Organisational values represent what are considered to be the acceptable norms of behaviour, and serve to guide and constrain the actions of employees (Hyde and Williamson, 2000). Studies have found value alignment to be significantly positively correlated with employee performance, commitment and employee turnover (Meglino, Ravlin and Adkins, 1992). Employees whose values are aligned with those of their organisation have a stronger psychological bond to the organisation and are more committed to going beyond role requirements (Coetzee, 2005; Hyde and Williamson, 2000). For family business leaders to create a committed workforce, it is essential for them to clearly communicate the core values of the business and to ensure that all employees understand and agree with them (Hyde and Williamson, 2000; Seevers, 2000).

Feedback and recognition

The amount of feedback and recognition received by a person influences whether that person has high or low organisational commitment (Yiing and Ahmad, 2009: 56-57). Personal recognition has been found to enhance employee self-esteem and confidence, and inspire employees to go beyond the call of duty (Laurent, 2003). Giving employees who have excelled in their work awards, public praise and bonuses lets them know that they are appreciated and valued, and is instrumental in keeping employee morale high (Ong, 2008: 10; Scott, 2008). Regular feedback on individual and company performance is also important because it keeps employees up-to-date with the performance of the business and allows them to know whether they are achieving their individual goals.

Family business leaders thus need to provide regular feedback and have a system in place that rewards outstanding non-family employees fairly for their efforts. Non-family members should be complimented and rewarded often and publicly, but criticised, if needed, in private. It is important for family business leaders to remain as objective as possible when dealing with non-family members, especially in situations that may involve conflicts between family and non-family employees (Devries, 2007).

RESEARCH METHODOLOGY

The population, sample and sampling procedure

The target population of this study consists of non-family employees in family businesses in the Nelson Mandela Metropole. The participants of this study were selected using non-probability sampling techniques, namely convenience sampling and snowball sampling. The initial participants of the study were selected by contacting known family businesses in the Nelson Mandela Metropole who were most conveniently available, and from these initial contacts additional participants were identified.

The sample comprised selected non-family employees from three family businesses in the Nelson Mandela Metropole. In order to protect the identities of the businesses and to serve as labels for identification, a random alphabetical letter was assigned to each of the three businesses. Business (A) is a small owner-managed family business in the manufacturing sector. Business (B) is a large family business in the construction industry, with branches in various parts of the country. Finally, business (C) is a large car-dealership, and operates in the services industry. Two non-family employees from business (A), three non-family employees from business (B) and four non-family employees from business (C) constituted the sample of this study.

Method of data collection

Owing to the qualitative, exploratory nature of the current study, the case-study method was utilised. Semi-structured personal interviews were chosen as the most appropriate means of obtaining the empirical data, since it was thought to allow for greater flexibility in the gathering of the facts than a quantitative approach such as the use of surveys. In addition, this data collection method was employed as a means to enhance the richness of the data since it would provide qualitative information that would reveal the underlying attitudes, feelings and perceptions that played a role in determining the commitment levels of the non-family employees interviewed.

In order to guide the interviewing process with respect to the personal interviews, an interview guide was developed which comprised a set of specific questions that captured the intent of the study. The 11 factors identified in the proposed conceptual model as influencing non-family employee commitment (Figure 1) served as the basis for the interview guide. The interview guide comprised specific questions pertaining to each of these 11 factors. In addition, 3 miscellaneous open-ended questions, which did not relate to the model, were included. The first of these questions revolved around whether the participants had

previously worked for a non-family business, and if so, how they considered working for a family business to be different. The second question aimed at gauging the participants' perceptions regarding family involvement in a business. The third question was concerned with gaining insight into what the participants considered to be the advantages and disadvantages of working for a family business. Finally, the interview guide was brought to a close with a number of questions which sought to gauge the degree of commitment to the family business displayed by each of the participants.

The primary data was captured by means of tape recordings, and was supplemented by notes that were taken in order to record certain non-verbal gesticulations and cues which provided important insights into the participants' true perceptions and feelings.

Data analysis

For the purpose of this study, the qualitative data obtained from the participants during their personal interviews were subjected to content analysis in order to identify common themes from the participant's responses to the semi-structured questions. When analysing and interpreting the empirical data, the researcher made use of Tesch's (1990) eight-step model of content analysis as described in De Vos (1998).

THE EMPIRICAL RESULTS

The participants in this study considered working for a family business to be different from working for a non-family business in the following ways:

The general consensus among the participants was that things get done more quickly in a family business since there are fewer management levels and less bureaucracy. Consequently one is able to go directly to the decision-makers. The participants also felt that communication lines are more open in a family business and that there is more information transfer, flexibility and freedom of expression. The participants commented that in a family business, closer relationships are built between the family and non-family members, which allow the non-family members to feel more connected to the family. The primary differentiating feature of a family business was found to be that one is made to feel like part of the family, whereas in a non-family business, one is "just a number".

The participants' perceptions regarding family involvement in a business were as follows:

Most of the participants had a positive outlook on family involvement in a business. They felt that family involvement strengthens a business since it often leads to a high sense of family-

member loyalty to the business, concern for the future of the organisation, and a long-term commitment to people. On the negative side, however, the participants recognised the potential for problems such as favouritism, unfair treatment in terms of remuneration and bonuses, irrational decision-making by family members, and family members' reluctance to relinquish decision-making authority to non-family members.

The participants considered the advantages and disadvantages of working for a family business to be as follows:

All of the participants considered the highly personalised interactions characterised by family businesses to be a primary advantage. Another advantage put forward by the participants was that in a family business, the leaders look after their employees' wellbeing, take a genuine interest in what they do and in how they feel, and the leaders are more approachable than the business leaders in a non-family business. Another advantage was that the participants felt a strong sense of involvement in the business affairs and perceived that they were entrusted with a high degree of responsibility. As previously mentioned, the participants considered the managerial hierarchical structure to be flatter in a family business, resulting in direct access to the owners and decision-makers, as well as a greater degree of information transfer and thus quicker decision-making processes. This was found to be a major advantage of working for a family business.

The disadvantages of working for a family business were found to be that family businesses are often characterised by a more informal management style, limited opportunities for career growth and development, difficulty in obtaining ownership shares, and familial complications.

The main findings pertaining to the proposed conceptual model of the factors influencing non-family employee commitment to the family business (independent variables) were as follows:

- Trust, respect and credibility of the family business leaders

All of the participants felt that it was important for the family business leader to trust them to perform their job. Trust is instrumental in developing a sense of autonomy on the part of the non-family employees. Reciprocally, the family business leaders also needed to be trustworthy in order to gain the commitment of their employees. In addition, family business leaders' respect for non-family employees was found to be important to the participants.

Finally, the participants felt that it was essential for the family business leaders to have credibility, since this assists in building trust.

- Leadership style

The participants considered leadership to be a key driving force in influencing employee commitment. They felt it to be essential for the family business leaders to be knowledgeable about the business operations and to have strong leadership skills. According to the participants the leaders of family businesses should provide direction to their employees and be worthy of their respect. They were further of the opinion that family business leaders needed to inspire loyalty among their workers by being considerate of them, supporting them, training and developing them, recognising them for their efforts, and treating them fairly.

- Personal needs alignment

All of the participants felt that it was essential to have their personal needs and career goals closely aligned with the opportunities available in the business. They felt that an important factor contributing towards personal needs alignment was the opportunity for personal growth and career development. The participants were in agreement that in order to grow and develop in a business, it is imperative for the business to grow.

Open communication

The participants unanimously agreed that open communication between the family business leaders and the non-family employees was an essential ingredient in contributing towards their commitment. The participants commented that open communication was an important factor in building their trust in the family business leader. In addition, participants considered it important for the family business leaders to communicate openly, honestly and regularly with them, and to share adequate information regarding the business operations. It was found that regular, open communication induced the participants to feel more involved in the business and encouraged them to feel more a part of the team. Another important issue noted in terms of communication was that it should not be one-sided but rather a two-way process.

- Supervisory support and concern for employees

The participants suggested that there is more personalised interaction in a family business. They added that such personalised interaction presents itself in the form of the family business leaders providing their employees with help and support when it is needed, being genuinely concerned for the well-being of their employees, and taking an interest in what they do. All of the participants remarked that such supervisory support and concern for employees strengthened their bond to their respective businesses and positively affected their commitment levels. In contrast, if one was treated as just “a number”, it would dampen employee morale and result in lower commitment levels.

- Fairness

The participants were of the opinion that in order to ensure fair and equal treatment of family and non-family employees, family businesses should implement formal and standardised human resource management practices. They recognised the potential for nepotism in a family business and were of the opinion that the standardisation of HR policies and procedures would enable each employee to have a voice, and would prevent preferential treatment of family members. The main issue brought up by the participants in terms of fair and equal treatment was that often in a family business the family members are given preference in terms of career advancement, promotions, compensation and bonuses. All of the participants indicated that fair and equal treatment of both family and non-family members was of primary concern to them. They stated that without fair treatment, they would lose respect for the family members and as a consequence would not be as driven to go beyond the call of duty.

- Role clarity

The participants suggested that in order to ensure role clarity within a family business, it is vital for each employee to receive a formal written job description which clearly outlines one’s work roles and responsibilities, as well as one’s reporting structures. Standardised HR policies and procedures would aid in reducing any ambiguity surrounding roles and responsibilities.

- Family harmony vs. family conflict

None of the participants reported any concerns regarding family conflict in their respective family businesses, and they agreed that in general there was harmony among the family members. However, they did acknowledge the fact that constant family feuding would negatively impact on their morale. They suggested that it was important to them for the family members to cooperate with one another. A lack of cooperation would lead to anxiety

on the part of the non-family members in terms of the future sustainability of the family business. The participants were concerned that if the family members did not get along, it could cost them the business, and then the non-family members could face unemployment. The participants suggested that family members need to constructively manage any conflict which may arise between them, and should try as far as possible to prevent such conflicts from affecting the non-family members.

- Non-family employee involvement in decision-making

All the participants recognised the potential for family members to exclude non-family employees from key decisions and processes, and to withhold certain information from them for fear of diluting family member control. However, the participants considered their involvement in the affairs of the business, as non-family employees, to be an essential determinant of their commitment. It was felt by participants that in order for a family business to grow, the family business leaders should draw on the expertise of non-family members and involve them in the strategic management of the business. Another reason why the participants felt it important for the family business leaders to involve them in matters relating to the business is that such involvement would make them feel valued as part of the team, which in turn would lead to an enhanced sense of job satisfaction and ultimate commitment to the family business.

- Shared values

All of the participants felt strongly that it was essential for them to identify with the family business they worked for, and for their values to be aligned with those of the business. They stated that it was important for the family business leaders to make the strategic decisions of the business known to the non-family employees. The participants all agree that sharing the same values as the family business positively influenced their levels of commitment to the business.

- Feedback and recognition

The participants indicated that regular feedback was a crucial factor influencing their commitment to the family business. They mentioned that regular feedback enabled them to understand whether they had achieved their goals and made them aware of where they stood in the family business. The participants suggested that family business leaders needed to meet regularly with their employees to discuss matters of mutual interest and issues concerning the family business. In addition, they suggested that family business leaders should state explicitly in each employee's job description, what their key

performance objectives were, and then conduct regular performance appraisals to ensure that everyone was achieving their objectives.

The participants agreed that recognition was an important factor influencing their level of commitment to the family business, since it made them feel valued and appreciated, and showed them that the family business leaders were looking after their interests and cared about their well-being.

- Non-family employee ownership and clarity concerning succession issues

After having conducted the empirical investigation, two other factors, not originally identified in the literature and in the proposed conceptual model (Figure 1), were identified as influencing non-family employee commitment to the family business. These two factors were: non-family employee ownership in the family business and clarity regarding family business succession issues. Four of the nine participants indicated that an important aspiration of theirs was to obtain ownership shares in the family business. They were of the opinion that having an ownership stake in the business would enhance their commitment levels as it would lead them to feel more attached to the family business.

Another concern raised by participants was uncertainty surrounding succession in the family business. The view held by the participants was that family business leaders often do not discuss the future direction and vision for the family business with the non-family employees, specifically, in terms of who will take over the family business once the current owners have retired. The participants indicated that a lack of communication regarding succession issues would lead them to feel uncertain and anxious about the future, ultimately leading to decreased levels of commitment. They also suggested that the credibility of the family business successors was an important factor affecting their commitment to the family business. Specifically, the participants stated that they would not want to work for the siblings or children of the current family business owner/s if such family members were inexperienced or incapable of effectively leading the business.

From the discussion and interviews with the participants, it seemed that the majority of them were committed to their respective family businesses. It was found that the most pertinent factors influencing their commitment were as follows:

- Leadership
- Autonomy
- Opportunities for career growth and development

- Open communication
- Supervisory support and concern for employees
- Fairness
- Involvement in decision-making
- Shared values
- Feedback and recognition
- Personalised interaction
- Ownership shares
- Clarity concerning succession issues

CONCLUSIONS AND RECOMMENDATIONS

Since a qualitative approach was adopted for the purpose of this study, concrete inferences or generalisations cannot be made about the population in general. However, the conclusions and recommendations provided are based on the three family businesses that served as the subjects of the empirical enquiry, as well as the literature study undertaken, and are of value to all family businesses employing non-family employees.

Family businesses are characterised by many dynamics not found in their non-family counterparts, some of which provide family businesses with a unique competitive advantage vis-à-vis non-family businesses. However, certain family business dynamics such as nepotism, family conflict and other familial complications can have destructive consequences for non-family employee commitment levels. Despite this, the conclusion was drawn that the highly personalised interaction often characterised by family businesses leads employees to be highly committed, perhaps even more so than in a non-family business. It appears to be commonplace for employees of a family business to develop an emotional attachment to the business and to become deeply entrenched in its values, such that the employees demonstrate a high sense of loyalty towards both the family members and the business itself. Given the important role that non-family employees play in any family business, specifically in terms of providing an objective perspective and in contributing towards the pool of knowledge and experience, it is essential that family business leaders nurture their relationships with these important stakeholders and strive to engender their commitment to the family business. As such, the following discussion is concerned with the managerial implications of the research findings, in terms of what family business leaders can do to motivate their employees to go beyond the call of duty.

Recommendations are only provided for the factors that were found to be the most pertinent ones influencing the participants' commitment to their respective family businesses.

Family business leaders need to possess strong leadership skills in order to ensure the commitment of their non-family employees. Non-family employees need to be provided with guidance and direction in order to be inspired to go beyond the call of duty. The key to good leadership is to continue to learn new methods and to keep up with the changes in the environment. Family business leaders need to be knowledgeable concerning the running of the business in order to gain the respect and admiration of their employees. According to the findings of the study, family business leaders should display a consultative and participative leadership style which entails treating all employees with respect, trusting them to do their work, listening to the opinions of the non-family employees, and encouraging employees to learn from their mistakes through training and by guiding them in the right direction. Another factor in terms of leadership that was found to affect non-family employee commitment levels is the commitment levels of the family business leaders themselves. In order to gain the respect of the non-family employees, it is recommended that the family members also demonstrate a deep-rooted commitment to ensuring the success of the family business. Many of the participants remarked that the family business leaders need to lead by example and thus need to be committed in order to inspire loyalty among their employees.

It is essential for family business leaders to trust their employees to perform their jobs, so as to provide employees with an enhanced sense of independence and responsibility. Providing employees with an enhanced sense of autonomy will lead them to feel empowered and in turn they will be more willing to strive to achieve the objectives of the family business. Constantly looking over their shoulders and displaying mistrust in their abilities will lead to lower employee morale, job dissatisfaction and lower commitment to the family business.

Opportunities for career growth and development were found in this study to be a strong driving force of the participants' commitment to the family business. Often in a family business, opportunities for growth and development are limited for non-family employees, since family members are given preferential treatment in this regard. The participants considered this to be one of the major disadvantages of working for a family business. It is thus essential for family business owners to provide non-family employees with equal opportunities to grow and develop within the family business. Equal opportunities will keep non-family employees stimulated and ensure that they have something to strive for. It is imperative for family business leaders to stimulate ambitious non-family employees in order to gain their commitment to the family business. It is recommended that every employee be

given equal opportunities to advance within the business, regardless of whether they are family or not, and to base promotion on merit and competence rather than employing or promoting a particular individual merely because they are family. It is also recommended that family business leaders invest in their human capital through constant training and development, since this will empower employees and enhance their sense of attachment to the business.

A concept linked to opportunities for career growth and development is business growth. Many of the participants stated that business growth was important for them since without it, career advancement and job stimulation would be limited. Family business leaders thus need to place an emphasis on business growth, to prevent highly ambitious and skilled non-family employees from seeking career opportunities elsewhere.

Communication was found to be a key factor in driving the participants' commitment levels, since it is an essential ingredient in building trust. Family business leaders need to communicate honestly, regularly and in a transparent manner with non-family employees. A lack thereof can lead to misunderstandings and feelings of alienation, both of which will decrease employee morale and motivation to go beyond the call of duty. The key issue here is to ensure that communication is a two-way process. Non-family employees need to feel that adequate information is shared with them and at the same time, that they are able to express their concerns and opinions to management.

Non-family employees, who perceive family business leaders to be supportive and considerate of them, experience an enhanced sense of attachment to the family business and are more willing to engage in behaviours that are beneficial for the family business. It is thus strongly recommended that family business leaders be compassionate towards their employees, show a genuine interest in them, and be concerned for their well-being. This will lead the employees to feel valued and respected as human beings, which will drive them to in turn act in the best interests of the business. Family business leaders can demonstrate their compassion and concern for their employees' well-being by constantly training and developing them and by implementing team-building activities. Ultimately developing mutually beneficial relationships between the family business leaders and their non-family employees is vital for ensuring commitment to the family business.

Issues of fairness were found to be a primary concern for the participants. Family businesses have often been criticised for engaging in destructive nepotism, which has been found to lead to high non-family employee turnover rates. It is therefore highly recommended

that family business leaders treat both family and non-family members equally and equitably in terms of opportunities for career advancement, compensation and bonuses. Promotions, compensation and bonuses must be based on performance and merit. Many family businesses are too small to have a formal HR department, but it is recommended that family businesses, regardless of their size, implement some form of standardised HR policies and procedures in order to keep non-family employees satisfied and committed to the family business.

Another potential problem characterised by family businesses is the potential for family members to be reluctant to involve non-family employees in matters of the family business, for fear of diluting family control. The findings of the study suggest that non-family employees who do not feel adequately involved in the affairs of the business, experience feelings of “being left out” which hampers commitment levels. Family business leaders need to involve non-family employees in business decisions and make them feel a part of the team. It is recommended that family business leaders draw on the opinions and advice of their non-family employees, as this will encourage them to feel valued and will strengthen their emotional attachment to the business. This in turn will inspire loyalty among the non-family employees and will encourage them to go the extra mile.

For one to be committed, it is essential that one’s values are aligned with those of the organisation where one works. Employees who identify with the business they work for will experience a greater sense of attachment to the business. It is therefore recommended that family business leaders explicitly communicate the goals, vision and future direction of the family business to non-family employees. Some of the participants indicated that they were not aware of the future direction of the family business, which caused feelings of anxiety on their part. Family business leaders need to be aware of what their employees’ values are, in order to ensure that they are aligned with those of the business. For example, if an employee strongly believes in the value of honesty, and the business engages in fraudulent behaviour, it will cause the employee to experience psychological distress and may result in the resignation of the employee.

Feedback and recognition were found to be vital factors influencing the participants’ commitment to the family business. It is strongly recommended that family business leaders make a concerted effort to provide non-family employees with regular feedback. Each employee should be given a formal written job description, detailing their key performance objectives. Performance appraisals should then be conducted on a regular basis in order to identify whether the employees have accomplished what they were intended to do. Regular

feedback reduces ambiguity and will allow each employee to understand whether they are achieving their goals or not. In addition to feedback on individual employee performance, the family business leaders need to provide their employees with regular feedback on the performance of the business. It is important for the non-family members to be kept up-to-date with the affairs of the business, since this will provide them with clarity in terms of the strategic direction of the business and will thus increase their motivation to achieve the objectives of the family business.

In terms of recognition, it was found that employees who were recognised for their efforts felt more valued and inspired to strive to achieve the organisation's objectives. Family business leaders need to reward non-family employees for outstanding performance. It is suggested that employees who have excelled should be given incentives of awards, bonuses, holidays etc. In addition to monetary rewards, some suggestions for recognising employees' efforts are to verbally congratulate them or send them a letter, or even place a photo of them on a wall describing their achievements for everyone to see.

All of the participants indicated that apart from monetary incentives, the primary reason for their commitment to their respective family businesses was the highly personalised interaction and emotional bond they had with the family members. It is thus recommended that family business leaders strive to build long-term, personalised relationships with their non-family employees by showing compassion for them and taking an interest in what they do. Family business leaders need to include the non-family employees and make them feel as though they are part of a business team. In a family business, it is the personalised interaction which creates an emotional bond to the family and to the business, and this is what drives non-family employees to be genuinely concerned for the future success of the business.

A number of participants expressed their desire to have an ownership stake in the family business. These participants mentioned that family business leaders need to recognise the ambitions of senior non-family managers in the family business, to grow further than just being management, but also in terms of an ownership stake in the business. These participants were of the opinion that the risk of not allowing skilled and experienced non-family members who have been in the business for years, to gain ownership in the family business, is that they may be lost to businesses where ownership is a possibility. It is thus recommended that family business leaders provide certain senior and deserving non-family managers with ownership shares in the family business, or let them partake in profit-sharing schemes.

Uncertainty surrounding the succession of the family business was found to be a source of concern for certain participants. They indicated that the uncertainty whether the family business would be succeeded by the next generation of family members or be sold, made them reluctant to invest more years in the business, for fear of being replaced once new management took over. In addition, non-family employees who did not agree with the choice of the future successor(s) might decide to resign because of uncertainty about the competence and capability of the successor(s) to effectively lead the family business. It is therefore recommended that family business leaders explicitly communicate with non-family members in terms of the future direction of the family business and the potential successors.

LIMITATIONS AND FUTURE RESEARCH

The conclusions and recommendations of this study are based on the perceptions of non-family employees. These perceptions could be tainted by bias or emotion, and are only representative of the family businesses in which they were employed. Snowball and convenience sampling techniques were employed. Any departure from probability sampling poses the threat of introducing potential sources of bias into the study. Owing to the qualitative and exploratory nature of this study, only a small number of family businesses in the Nelson Mandela Metropole served as the case studies. As a result, the sample size was relatively small, preventing the researcher from being able to make concrete inferences about the population based on the sample.

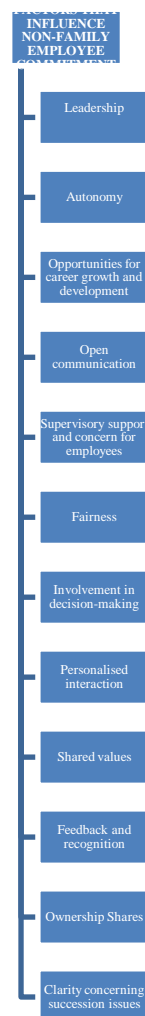
Although the present study endeavoured to expand the existing body of knowledge on the role and importance of non-family employees in family businesses by gaining insight into the factors that influenced their commitment to the family business, certain areas still need to be explored and developed further. A future research suggestion is to investigate both non-family businesses and family businesses in order to establish whether different factors determine employee commitment levels in a non-family business compared to a family business. Such research could provide valuable insight into how the dynamics unique to family businesses play a role in affecting employee commitment levels.

In this study, commitment was treated as a unidimensional construct. However, according to Meyer and Allen (1991), organisational commitment can take on three distinct forms: an affective attachment to the organisation, an individual's awareness of the perceived costs associated with leaving the organisation, and an obligation to remain with the organisation. These three forms are referred to as *affective*, *continuance* and *normative* commitment respectively, and each has a different impact on the work-related behavior of individuals within organisations. It is recommended that future research attempt to establish what

determines whether a non-family employee is affectively, continually or normatively committed to the family business, and how these various types of commitment impact on the family business in terms of firm performance, profitability and future success.

Perhaps the most obvious limitation of this study was that it was mainly qualitative in nature, based on a small sample of participants from the Nelson Mandela Metropole. Given the results of the empirical investigation, it is suggested that the proposed conceptual model as illustrated in Figure 2, be tested in a large empirical sample of non-family employees nationally.

FIGURE 2: PROPOSED CONCEPTUAL MODEL OF FACTORS INFLUENCING NON-FAMILY EMPLOYEE COMMITMENT TO BE EMPIRICALLY TESTED IN FUTURE RESEARCH



It is evident from this study that non-family employees play a pivotal role in contributing towards the successful functioning of family businesses. It is therefore essential for family business leaders to place an emphasis on nurturing their relationships with, and stimulating the commitment of, their non-family employees.

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CONTENT ANALYSIS OF MANAGEMENT RESEARCH PUBLISHED IN *MANAGEMENT DYNAMICS*

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ABSTRACT

The publication of scholarly literature is vital for the creation and support of knowledge in any academic discipline. However, there is little published research available concerning the state of academic management literature in South Africa. Articles which appeared in the *Management Dynamics* journal during the period 2004 to 2008 were reviewed by means of content analysis. Some findings support previous research findings of studies conducted abroad, while others show differences. The study identified a high number of co-authored articles, a high rate of reliability reporting and a preference for quantitative research methods. The study also identified a preference among authors towards non-probability sampling methods and a low participation rate from industry practitioners.

INTRODUCTION

The publication of academic research contributes to the body of knowledge of a discipline as it provides insight that has been formulated and contextualised in a scientific fashion. With technological advances and the increased pressure on academics to publish in prestigious journals, a proliferation of scholarly articles has been witnessed worldwide (Goel & Faria, 2007:537). This has, in turn, led to a need to review published academic articles, as a means of assessing each journal's credibility and contribution according to its vision and mission.

From an academic perspective, the significance of a review is that an objective assessment can assist academics to choose the most qualified and appropriate journal for publishing one's research findings. Furthermore, a journal's assessment vis-à-vis a peer journal identifies those that are more prestigious and more desirable to publish in (Pouris, 2004:515). One question is whether articles are really making a significant contribution to the body of knowledge, as this should be an academic's main concern. A review process could be one way to identify the shortcomings, challenges and patterns of a specific research domain. From a managerial point of view, a review is essential also for practitioners who wish to apply research articles' findings in their industry or product category (Ankers & Brennan, 2002:18).

A few researchers have analysed the content of South African journals in the business and management-related fields. Studies by Baker (2008:411) and Clark, Dick, Epperecht, du Plessis, Matlakala, Moremi, Raganya, Rich, Richards, Sewpershad, and Timm (2002:67) reviewed South African journals in general, while the only identified discipline-specific studies focused on information systems (Brown & Tanner, 2008:14) and accounting (West,

2006:121). This leaves the question unanswered regarding the status and extent of published articles in the management discipline because of the lack of feedback mechanisms or benchmarks to monitor the status or quality of journal articles and/or specific research domains. Therefore, a review of academic management journals is needed to provide a view of the state of published journal articles.

As a review of the entire spectrum of South African management journals would be difficult to implement due to the sheer size of the enterprise, the authors have selected *Management Dynamics* as a starting point from which to conduct the analysis. The journal is currently published in South Africa by the Southern African Institute for Management Scientists, and is recognised as one of the leading publications of its type. It was first published in 1992, and has been available online in full-text since 2002. The Journal currently publishes four issues per year, with the preferred language being English (Sabinet, n.d.). Thus, while an analysis of *Management Dynamics* would not paint a representative picture of the state of academic management research in South Africa, it may provide insight from which a glimpse of the big picture can be gained.

- The main purpose of this study is to conduct a content analysis of articles which appeared in the *Management Dynamics* journal from 2004 to 2008. The aim is to investigate certain research questions, such as **the number of authors per article, sample designs, reliability and validity reporting, research methodologies employed** and other factors in order to identify challenges and limitations that researchers might face, as well as try to get some understanding of the state of academic management research in South Africa as a whole.

LITERATURE REVIEW

Academic Publications in Perspective

Academic publishing is the main conduit in which both academics and practitioners can make their work widely available on a platform that has credibility and is supported by peer review (Parker, 2009). Yuyuenyongwatana and Carraher (2008:1) have identified four reasons for conducting research. Firstly, to gain a better understanding of a certain phenomenon presented in a concise manner. Secondly, to promote the discussion and critique of each academic perspective. Thirdly, to recognise the authors in distinctive fields of study due to noteworthy publications. Finally, the attempt to broaden knowledge through research and then contribute to better teaching standards by means of publication.

Most institutions find it important to award funds to and provide internal incentives for authors who publish in academic journals as it brings recognition and status to such institutions. This, eventually, creates a system which promotes the constant addition and criticism of the current body of knowledge.

There are several relevant reasons to review the state of publications. Firstly, reviews may be conducted to ensure the compliance with correct formatting and style features, ethical guidelines and meaningful contribution to the topic at study (Clark et al., 2002:67). Secondly, content analyses allow for third party evaluation of journals through methods like citation indexes and peer review. This is important because it provides an impartial evaluation of journals and an overall picture of the field of research (Anon, 2005). Thirdly, a periodical analysis of the content of journals leads to the identification of trends and other gaps that a certain field might have (Bush & Grant, 2001:59). Finally, reviews of academic publications allows for the identification of the relative importance of journals for each stakeholder constituency (Pouris, 2004:515).

Normally, researchers prefer to publish in the best ranked journals, mainly for reasons of recognition. Analysing journal content provides editors with a comparative and benchmarking standing of their published articles in order to justify sponsorship and use it as a promotional tool. In a librarian's case, budget constraints mean that only the highly ranked journals would be considered as a means of contributing to the library's collection. From a tertiary institution's point of view, the reviewing process is an important means through which governments allocate funding (Pouris, 2004:515). Lastly, from a manager's perspective, journal reviews provide them with a valuable journal list from which they can select (Ankers & Brennan, 2002:18).

Academic publishing in the South African context

In South Africa, a journal has to meet certain criteria set by the Department of Education to qualify for the list of approved journals (Department of Education, in Darch & Underwood, 2005:2). Many question the process of compiling the approved journal list mainly because it is conducted by overseas bodies, which might not consider the dynamics of the South African environment. Furthermore, such a list does not promote multilingualism, especially when considering that South Africa has 11 official languages (Darch and Underwood, 2005:3).

In general, South Africa faces a major challenge in terms of overall contribution to the research domain. Worldwide, only 5.2% of the total number of research papers is submitted

by developing countries. This is alarming, considering that the only two African countries in this group are South Africa and Nigeria (Singh, 2006:154). This is underscored by the fact that only one African university is listed in the Top 200 Universities ranked by *Times Higher Education Supplement* (Times Higher Education, 2009).

To further illustrate the challenges South Africa faces, only a limited number of groups have created joint publications such as the Isteg Scientific Publications (Baker, 2008:412). However, these publication nodes often struggle, as they rely on external funding and consist of small-scale, specialised personnel. This highlights that South Africa lacks a structural system for the editing and dissemination of journals.

Another challenge facing South African research is that academics appear to select research topics that are dated, thus providing no additional knowledge (Singh, 2006:155). To add to this situation, researchers seem to build on international research in the hope of being published in recognised journals or focus their research on South African specific situations, with the risk of being rejected.

To overcome many of the limitations that journals face, partnerships with foreign journals and publishers are being established with the means to gain admission to: (1) an online access portal; (2) an electronic article tracking system; and (3) an international platform for greater coverage. In South Africa, Sabinet is the largest database for electronic journals. Although fees restrict the access to certain journals, it provides a starting point for exposure and research (Baker, 2008:412).

Some of the above-mentioned challenges highlight the need to review South African academic publications as a means of improving articles published, and consequently elevating South Africa's stature in the academic world.

The current state of journal reviews

Internationally, a few studies have reviewed the extent of research publications in the economic and management sciences (Goel & Faria, 2007:537; West, 2007:547; Doreian in Baumgartner & Pieters, 2003:125; Bush & Grant, 2001:60; Kolbe & Burnett, 1991:248; Yale & Gilly, 1988:21). From these studies, certain publication variables were investigated such as a journal's appraisal within its domain, the impact of the Internet on journals, scope of the topics, theoretical foundations of articles, gender and multiplicity of authorship, methodology, as well as reliability and validity. Some of the main findings from these studies are briefly discussed below.

Different approaches exist on how to evaluate a journal's prestige and competitiveness. One approach is to note the number of citations, where a high frequency can relate to a significant contribution to the body of knowledge (Doreian in Baumgartner & Pieters, 2003:125). Another approach to evaluate a journal's quality is to look at rankings published, such as the Integrated Rankings by Dubois and Reeb (2000:700) which can provide a benchmark that can be tracked over time.

The exponential rate at which technological advancements occur has had an impact on journals. A noted implication is the use of the internet as a publishing platform (Goel & Faria, 2007:537), making it possible for communication costs to decrease while the speed of publications has increased. This wider exposure of articles in recognised online platforms allows for post-publication reviews to be performed by a greater number and diversity of people (Anon, 2005).

Considering the wide spectrum of topics researched, Bush & Grant (2001:60) surmised that the majority of studies are of a behavioural nature, thus benefiting from existing theoretical models as a foundation for hypotheses. Yale & Gilly (1988:21) argued that this might be due to the subjective evaluation of editors and/or reviewers that lead to a rejection of certain topics, thus discouraging further research. They challenge whether the extremity in the topic spectrum can only be attributed to the lack of interest from the research community in specific topics.

Many previous studies identified the starting point for journal reviewing to be the examination of the theoretical background of each article to evaluate whether it is based on sound theoretical concepts (Bush & Grant, 2001:64). Even as early as 1984, Albaum and Peterson (1984:169) stated that the link between theory and research are important to avoid isolation and ensure meaningful contribution to the existing body of knowledge.

Findings from previous studies identified a tendency for articles to be published by two or more authors, reflecting a shift away from single authorship (West, 2007:547). Possible reasons could include the advancement of knowledge in an area, an increase in interdisciplinary topics and advances in statistical techniques and analysis software, which all require more expertise (Manton & English, 2007:166).

Previous studies suggest that there has not been a significant change in the number of empirical articles, with two studies reporting that a total of 70% of their sampled articles were

empirically-based (West, 2007:549; Yale & Gilly, 1988:17). In terms of research methods, one survey's results represented almost half of the total number of the methods used (Bush & Grant, 2001:62). Regarding sampling designs applied, non-probability sampling (more specifically judgement samples) was found to be the most prevalent (Albaum & Peterson, 1984:167).

Many researchers believe that reliability and validity analyses are important when establishing the credibility of one's research. Despite this, it is surprising that many researchers report very little, or even nothing on the reliability or validity of their research. Kolbe and Burnett (1991:248) found that less than 40% of the 128 articles they investigated reported any general reliability. A very low instance of any form of reliability or validity reporting in published articles was recorded by Albaum and Peterson (1984:168), in a study of 111 empirical studies (with only two articles reporting it). If the fundamental reason for an article to be written is to put an idea forward, and if such idea is not supported by a credible research method, then one can question the legitimacy of such an article as a contribution to the body of knowledge.

RESEARCH QUESTIONS

The objective of the study was not only to investigate **what** is being researched and published in *Management Dynamics*, but also **how** research is being conducted by **whom** and **from** which institution/organisation. The following research questions are formulated:

- Is there an increase in the number of authors per article over the period of study?
- What type of sample designs were employed in the empirical studies which appeared as articles in the journal for the years 2004 to 2008?
- What are the trends related to the methodology of research studies over a five year period for the journal in the study?
- What is the extent of reporting on the reliability and validity within the articles over the period 2004 to 2008?

The section that follows explains the methodology used in this study in order to answer the research questions above.

RESEARCH METHODOLOGY

According to Pasadeos (in West, 2007) studies of scholarly literature can be categorised along six dimensions, namely publishing productivity; comprehensive reviews; meta-analyses; specific journal investigations; methodological investigations; and citation

analyses. This study can be categorised as a *specific journal investigation* which include aspects of methodological investigations.

Sample

The target population for the study comprised of the *Management Dynamics* journal with the specific units of analysis being the articles published from 2004 to 2008. The evaluation of this journal's articles is seen as important due to its prominence in the South African management sciences domain. The five-year period chosen was due to its recent nature and the fact that such data was available online on the Sabinet platform for the general public. The study can be defined as a census since all 72 articles published during the five years under analysis were included in the sample.

Data collection

The study was conducted through a content analysis which is a process that codes written data and provides empirical evidence to which one can draw conclusions. This method is often preferred as reliability and validity tests can be conducted and data are easily processed in computerised systems (Cooper & Schindler, 2008:423). Furthermore, it is seen as an unobtrusive measure that is free from respondent bias (Yale & Gilly, 1988:13) and provides *ex post facto* evidence of the variables (West, 2007:544).

However, it is important to acknowledge the disadvantages that content analysis poses. First, the output of content analysis is dependent on the worth of the documents available. For the current study the output was restricted to what was available within the articles. Second, it relies on interpretation from the coders in order to make use of the coding sheet. Hence, there might be a gap between the true meaning of items in the coding sheet and the agreement between coders (Bryman & Bell, 2007:321; Wallen & Fraenkel, 2001:419). Third, emphasis is placed on the measurable items, rather than the true theoretical importance of each article. Thus, the context in which the articles were written might be lost, as coding sheets produce standardised information. This reflects the reductive nature of content analysis when extracting information from complex texts (Colorado State University, 2009; Bryman & Bell, 2007:321).

Based on the findings and trends discussed in the literature review, the following variables were used to develop the coding sheet for the study: (1) number of authors; (2) methodology applied; (3) sampling design; (4) reliability assessment; and (5) validity assessment.

Reliability

Intercoder reliability is generally considered the defining element for the measuring of the quality of a review or content analysis (Kolbe & Burnett, 1991: 244). The data for the study was coded by the main researcher and one independent coder. Coder training was provided to the independent coder using a codebook that provided clear descriptions of all the coding variables to be analysed. Hayes and Krippendorff (2007:80-81) and Neuendorf (2002:148) list various popular methods that are used by content analysts to evaluate reliability, including per cent agreement, Scott's *pi*, Cohen's *kappa*, Krippendorff's *alpha*, Spearman's *rho* and Pearson's correlation coefficient. Krippendorff's *alpha* is suggested by Hayes and Krippendorff (2007:81) as the standard statistic measure for inter-coder reliability. Since Krippendorff's *alpha* measures intercoder agreement and is considered "the most general agreement measure with appropriate reliability interpretations" (Krippendorff, 2004:221), it was used as the measure of intercoder reliability for the current study. Researchers vary on the acceptable level of reliability for content analysis data. A review of various opinions concludes that reliability scores of 0.80 or higher is considered acceptable (Neuendorf, 2002:143), although Krippendorff (2004:241) asserts that variables with reliabilities of between 0.67 and 0.80 can be considered for drawing provisional conclusions. The reliability sample needs to be representative of the items that are studied. Therefore, the sample for reliability purposes should be drawn randomly. The reliability sample for the study was drawn using simple random sampling. It is commonly agreed that there is no set standard for deciding on the size of the subsample. Wimmer and Dominick (in Riffe *et al.* 2005:143) suggest between 10% and 100% of the content under scrutiny, and a decision was made to draw a sample of 69%.

Validity

Validity is generally defined in research texts as the degree to which a particular research instrument measures what it needs to measure (Leedy & Ormrod, 2005:28). For example, if the content analysis aims to measure the incidence of single versus multiple authorships, it will be considered valid if the results clearly indicate the actual frequency of the authorship. Face validity, one of the measures of validity, refers to the extent to which the measures fit what is expected (Krippendorff, 2004:313). Therefore if the findings of the content analysis make general sense, they are considered valid in terms of face validity. Additionally, the current study used one independent coder that also reviewed the measures, as suggested by Neuendorf (2002:115). This enhances the face validity of the present study. Content validity refers to the degree of completeness of the measure, in other words whether it manifests everything the concept represents (Neuendorf, 2002:116). In the current study, content validity was measured in terms of the comprehensiveness of the category

descriptions. For example, to determine the sampling designs used, various design types were included in the analysis as described in the codebook, and the descriptions aimed at covering all aspects that may indicate a specific sampling design.

RESULTS AND DISCUSSION

Content analysis was used to review and analyse a total of 72 articles in the *Management Dynamics* journal across a period of five years. The results are reported according to the research questions, followed by a presentation of the general findings on categories and topics of articles, nature of the studies, data collection methods, and authors' affiliations.

Reliability results

Krippendorff's alpha was calculated for each variable in the study and the results are displayed below.

Table 2: Intercoder reliability results

Variable	Krippendorff alpha
Number of authors	1
Occupation of authors	0.91
Institution/organisation	0.97
Topic of article	0.77
Broad research category (qualitative versus quantitative)	0.76
Research design	0.87
Main sampling method (probability versus non-probability)	0.83
Subsampling method (types of sampling methods)	0.77
Data collection instrument	0.79
Statistical techniques used	0.63
Reliability assessment	0.69
Validity assessment	0.49

From Table 1 it is clear that all variables, except for two (statistical techniques and validity assessment) were above the 0.67 cut-off as suggested earlier. The wide variety of statistical techniques used in research, as well as the difficulty in identifying which validity assessment was made, may explain the two lower reliability results. To address the low reliability scores, the researchers and coder discussed the disagreements and recoded the data. This process was also conducted for all the other variables and all the corrected values were used in the

final data set on which findings are reported. The findings of the study are outlined and discussed according to the research questions below.

General findings

Concerning the institutional affiliation of academics published in *Management Dynamics* several trends were identified. The largest contributor was by far the University of Stellenbosch, who accounted for a quarter (25.83%) of all authors published in the journal. The next highest contributor was the Nelson Mandela Metropolitan University, home of 17% of the authors published. Other significant contributing institutions are the North West University (9.3%); followed by the University of Pretoria (8.6%); the University of Cape Town (5.2%) and the University of Witwatersrand (4.6%).

A pleasantly surprising finding was that 12% of academics published in *Management Dynamics* hail from foreign institutions. This means that as a group, foreign institutions provide the third highest number of academics published in the journal. This exposure to different perspectives and methodologies can only improve the quality perception of the journal.

In order to identify the topics of research published in *Management Dynamics*, articles were categorised according to eight disciplines of the economic and management sciences. It was found that the most popular topics of research were marketing/corporate communication (27.8%), general business (23.6%) and human resources/industrial psychology (22.2%). However, while marketing and general business articles have remained stable in every issue (averaging 4 articles each), studies focusing on human resources have been decreasing over the five year period under analysis.

Finally, in terms of authorship, it was found that practitioners authored, or co-authored articles published in *Management Dynamics* only 7 times over the five year period under analysis, with the overwhelming majority (90%) of articles being published by academics.

Research question 1: Is there an increase in the number of authors per article over the period of study?

Table 2 below illustrates a cross tabulation of the number of authors and the year in which the article was published.

Table 2: Total number of authors per article per year of publication

Total number of authors		Year of publication					Total
		2004	2005	2006	2007	2008	
1	n	5	3	4	4	3	19
	%	38.5%	18.8%	23.5%	28.6%	25.0%	26.4%
2	n	4	8	7	5	4	28
	%	30.8%	50.0%	41.2%	35.7%	33.3%	38.9%
3	n	4	3	2	4	5	18
	%	30.8%	18.8%	11.8%	28.6%	41.7%	25.0%
4	n	0	2	4	1	0	7
	%	.0%	12.5%	23.5%	7.1%	.0%	9.7%
> 1 author per article		8	13	13	10	9	53
		61.6%	81.2%	76.5%	71.4%	75.5%	73.6%

Table 2 above shows that articles with a single author have decreased from five to three over the period under analysis, accounting for 26.4% of all articles published in *Management Dynamics* from 2004 to 2008. Articles with more than one author have increased and then decreased over the five year period. Eight co-authored articles appeared in *Management Dynamics* in 2004, with a peak of thirteen being reached in 2005 and 2006, followed by a decline to ten and then nine co-authored articles over the next two years. Collectively, co-authored articles accounted for 73.6% of all articles published in *Management Dynamics* in the period under analysis, with articles with two authors forming the largest sub-set of this group.

The findings indicate that there has been a decrease in single authorship and that a large number (almost 40% over the five year period) of articles published in *Management Dynamics* had two authors, which are in line with trends identified in similar studies conducted abroad (West, 2007:547). The fact that the overwhelming majority of articles (73.6%) had more than one author might stem from the fact that quality of research is usually improved when there is collaboration between several authors, as a result of more advanced statistical techniques being utilised and the potential for interdisciplinary collaboration (Manton & English, 2007:166).

Research question 2: What is the sample design of the empirical studies which appeared as articles in the journal for the years 2004 to 2008?

When it came to sample selection, authors publishing in *Management Dynamics* over the five year period under analysis appear to prefer non-probability techniques. Over the five year period under analysis, there were 57 cases of a study employing some form of sample. Non-probability samples were used in about 50% of the cases, while 23.2% employed a probability sample selection method. The remaining 29% were cases where the sampling technique was not mentioned.

The most common non-probability sampling method employed was convenience sampling. For probability samples, simple random sampling was the most widely used, and this concurs with the findings of Albaum and Peterson (1984:167). The most widely used sampling design was convenience (31% of cases), followed by just over 7% simple random sampling and various others techniques (<4% each) which included systematic, stratified, cluster, quota, and snowball.

Research question 3: What are the trends related to the methodology of research studies over a five year period for the journal in the study?

In terms of broad design, the results showed that an overwhelming majority of studies (64.3%) published in *Management Dynamics* during the five year period were of a quantitative nature. Qualitative studies accounted for about 22% of publications, while 8.6% of studies employed a mixed design or two stage setup.

These findings are in line with the findings of similar studies conducted abroad. For instance studies by Yale and Gilly (1988:17) and West (2007:549) both found that about 70% of articles published in management journals were of a quantitative nature. This may be due to researchers' preference in supporting their ideas in a logical, empirical manner rather than using more subjective methods – especially given the nature of the business science discipline.

With respect to research design, the results indicated that exploratory studies were the most common type of study published in *Management Dynamics*. Exploratory studies accounted for 43.1% of the studies published. Other popular study types included descriptive studies (22.2%) and purely conceptual studies (16.7%).

When it came to data collection techniques, 79 cases were observed in 72 articles as a result of some studies employing more than one method. The most popular data collection instrument was a questionnaire (survey method), accounting for 56.9% of the cases,

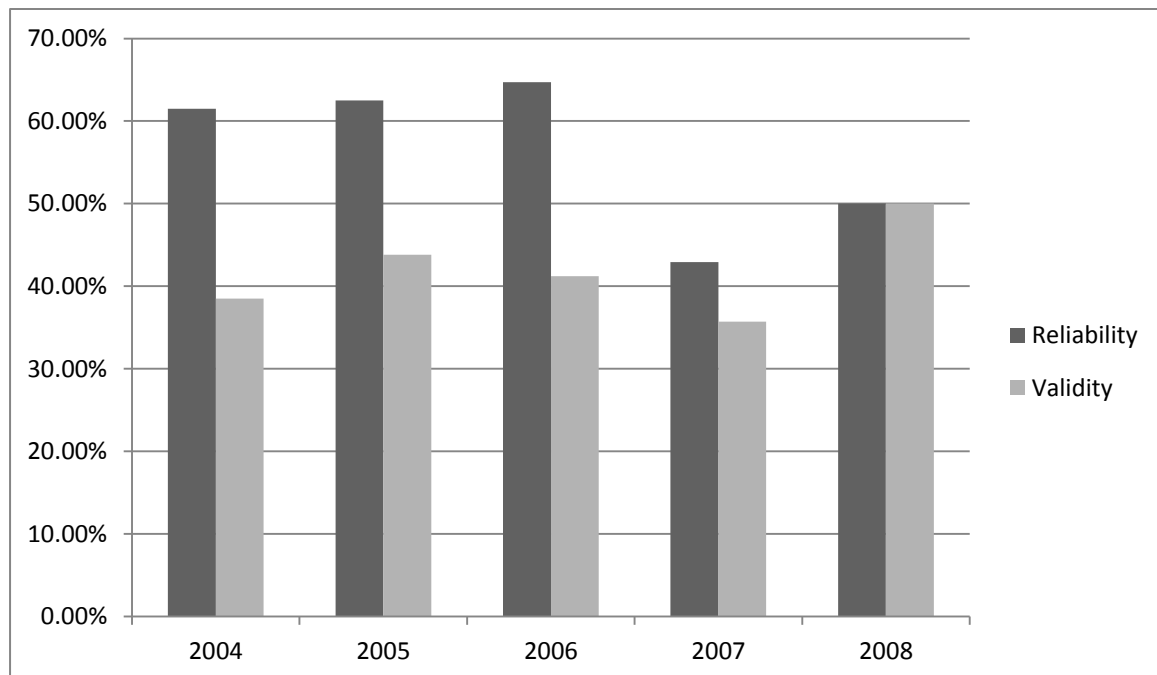
followed by secondary research, documents and content analyses – which accounted for 25% of cases. Other data collection methods accounted for the remaining percentage, with interviews and focus groups being the largest of these at 11%. Again these findings are concurrent with the results of studies conducted abroad. Bush and Grant (2001:62), for example, also found that surveys (questionnaires) represented about half of the total number of the methods used.

The analysis of the statistical reporting of studies published in *Management Dynamics* indicated that authors employ a wide variety of statistical analyses in their articles. In fact, many studies utilised more than one statistical analysis technique. As a result, 180 cases were observed in 72 articles. Most of the articles (58%) reported descriptive statistics concerning the study carried out, while almost half (48%) conducted some form of factor analysis. Correlation analyses, regression analyses and t-tests/Chi-square tests all occurred in about 25% of cases, while ANOVA's were conducted in almost 20% of the cases.

Research question 4: What is the extent of reporting on the reliability and validity within each article over the period 2004 to 2008?

The number of articles (percentages) reporting reliability and/or validity per year are depicted in Figure 1.

Figure 8: Percentages for reliability and validity reports per year



It can be observed from Figure 1 above that over 60% of the articles published in 2004, 2005 and 2006 had reports on the reliability of the studies conducted. There was a significant drop to 42.9% in 2007, followed by an increase in 2008 – where half of the articles published in *Management Dynamics* reported on reliability. Overall, it was found that during the five year period of 2004 to 2008, as much as 41 of the articles published in *Management Dynamics* (accounting for 56.9% of publications) reported reliability.

Concerning validity, Figure 1 indicates that the prevalence of validity reporting in articles published in *Management Dynamics* ranged between 35% and 45% for the years 2004 to 2007, with an increase to 50% being observed in 2008. Overall, during the entire period under analysis, 30 articles (or 41.7%) contained reports concerning the validity of the studies conducted.

In general, these results are quite high and pleasantly surprising. Reliability reporting especially is quite high when compared to studies conducted abroad (Kolbe & Brunette, 1991:248).

Many of the findings discussed correlate with trends found in international studies. The answers to the research questions identify opportunities for improvement, managerial suggestions and recommendations as addressed in the next section.

IMPLICATIONS AND RECOMMENDATIONS

This study identified several pleasing findings concerning the research published in *Management Dynamics*. The high rate of co-authorship, the high reporting of reliability measures and the high participation of foreign academics are all very encouraging. There are however, areas where there is room for improvement. These are briefly discussed below.

Firstly, the finding that more than 90% of all articles were written by academics is of some concern and signals that editors should encourage the participation of practitioners to contribute either individually or in collaboration with authors from the academic fraternity. This will enhance diversity and create synergy for sharing expertise.

Secondly, the high prevalence of non-probability samples also brings into question the representativeness and the ability to generalise the findings of the studies published in *Management Dynamics*. Alarming is that 29% of the research did not even indicate which sampling technique was used. As most multivariate statistics rely on random sampling,

above and beyond other assumptions that need to be satisfied, South African researchers should consider employing more representative sampling methods in their research, especially if they want to publish in A-rated international journals. It is therefore recommended that encouragement be given for the use of probability techniques when selecting samples for studies.

The results indicated that almost half of the published research was exploratory in nature. This is indicative of a relative low level of research output as theory development and refinement needs to extent beyond the exploratory level. To be competitive internationally, South African researchers need to move to towards descriptive, but preferably, causal research designs.

The analysis of the statistical techniques showed that the majority of research articles use descriptive statistics (58%), with factor analysis being the most popular multivariate statistical technique (48%). Unfortunately very low levels of predictive modelling were reported, showing once again that South African researchers have not yet included such techniques in their research activities. To be noted and published in top rated international journals, statistical analysis needs to move beyond descriptive analyses.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Due to the exploratory nature of the study, the results merely portray the trends of the *Management Dynamics* journal and thus cannot be generalised to the broad South African academic literature.

As content analysis was conducted, a few limitations are acknowledged regarding this type of data collection technique. The main limitation related to the differences in interpretation from coders as seen in the low Krippendorff alpha scores. This leads to a gap between the true meaning of items in the coding sheet and the agreement between coders (Bryman & Bell, 2007:321; Wallen & Fraenkel, 2001:419). Future studies should include reliability measurement for both the pilot and final stages of the research. Improved coder training may also lead to higher intercoder agreements, especially regarding available statistical techniques and assessments.

It is acknowledged that the number of journals could have been more in order to obtain a clearer picture regarding the trends and patterns in management literature. It is recommended that future studies include more South African journals as a means of extensively assessing the status of academic literature in South Africa. Comparison with

international trends is also recommended, especially since there is increased pressure on South African academics to publish internationally.

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**THE LEADERSHIP DEVELOPMENT OF STUDENTS AT A HIGHER EDUCATION
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ABSTRACT

The primary aim of this research study was to conduct a literature and empirical investigation of the leadership development of students in a selected Higher Education Institution (HEI) in South Africa. The leadership development approaches and processes as identified by Campbell, Dardis and Campbell, (2003) were used to evaluate the leadership development of students. Both qualitative and quantitative research approaches were used. Data was gathered from student leaders using a questionnaire adapted from Amos Skills Development Questionnaire and focus groups. The data was analyzed using Statistica 8 which is a statistical data analysis program. From the findings it was identified that the five skills necessary to be an effective leader as identified by Campbell *et al.* (2003) namely intrapersonal, interpersonal, cognitive, communication and task specific skills have been developed amongst the student leaders. Tutoring and sub-wardening, leadership

development workshops, planned tasks and assignments as well as formal and informal feedback have been identified as the methods by which student leaders are developed.

INTRODUCTION

Higher Education Institutions (HEIs) are tasked with the role of developing the students' integrity and strength of character that prepare them for leadership (King, 1997, cited in Dugan and Komives, 2007: 8). Though leadership can be learned, this learning does not necessarily have to take place in the class room; individuals must teach themselves by doing it, observing it and interacting with others (Hill, 2005: 28). In terms of how leadership skills should be developed much of the literature is normative, based on beliefs rather than research (Bush and Glover, 2004: 13). For this reason the primary aim of this research study was to conduct a literature and empirical investigation of the leadership development of students in a selected HEI in South Africa

AIM AND OBJECTIVES

The primary aim of this research study was to conduct a literature and empirical investigation of the leadership development of students in a selected HEI in South Africa. In order to give effect to the aim a number of research objectives were identified:

- Firstly to analyse the various approaches to leadership development, namely intrapersonal, interpersonal, cognitive, communication and task specific development.
- Secondly to analyse the different leadership development processes, namely mentoring and modelling, formal training, planned job assignments, formal feedback and reflective self evaluation.
- Thirdly, to provide pertinent conclusions and recommendations with regards to the role of higher education in leadership development.

LITERATURE REVIEW

Leadership Development

According to McCauley, Moxley and Van Velsor (1998, cited in Day, 2000: 581), "leadership development is defined as expanding the collective capacity of organizational members to engage effectively in leadership roles and processes" where leadership roles can be defined

as those that come with and without formal authority and leadership processes as those that generally enable groups of people to work together in meaningful ways (McCauley *et al.*, 1998 cited in Day, 2000: 581).

The leadership development approaches and processes as identified by Campbell, Dardis and Campbell, (2003:1) were used to evaluate the leadership development of students. According to Campbell *et al.* (2003) there are five approaches to leadership development focused on developing: intrapersonal attributes; interpersonal qualities; cognitive abilities; communication skills; and task-specific skills. In addition Campbell *et al.* (2003) identify five leadership development processes, namely mentoring and modeling; formal executive training; planned job assignments and experiences; formal feedback; and reflective self-evaluation. Although the above mentioned approaches and processes to leadership development overlap in reality, they are treated as conceptually distinct for analytical clarity.

Approaches to Leadership Development (What to Develop?)

Campbell *et al.* (2003:1) identifies five approaches to leadership development focused on developing: 1) intrapersonal attributes; 2) interpersonal qualities; 3) cognitive abilities; 4) communication skills; and 5) task-specific skills. These approaches are discussed as follows:-

Leader/Intrapersonal Development

On a practical level, all leadership development approaches place some degree of emphasis on personal and individual development (Campbell *et al.*, 2003: 30). For this reason development of leaders is thought to occur primarily through training individuals and enhancing their intrapersonal skills and abilities (Neck and Manz, 1996; Skarlicki and Latham, 1997; Stewart *et al.*, 1996, cited in Day, 2001: 583). Leader development helps the individual create an accurate and healthy self model, and includes undertakings designed to heighten self-awareness, increase self regulation, and enhance self-motivation (Day, 2001 cited in Campbell *et al.*, 2003: 30).

The development of self-insight, self-regulation, and moral character is not limited to leadership development. Many researchers and authors agree that leadership is a social influence process (Hersey and Blanchard, 1993: 93; Yukl, 1994: 5; Wright and Taylor, 1994: 2 and House and Mitchell, 1975; Burke, 1982; Locke, 1991; Stogdill, 1974, cited in Campbell

et al., 2003: 3). Intra-personal development is important as it presumably allows the person to execute various social roles more effectively, including the leadership role (Campbell *et al.*, 2003:1).

Leadership/Interpersonal Development

This traditional approach to leadership development sees leadership as a social influence process (Campbell *et al.*, 2003: 31). Interpersonal intelligence is defined as the ability to understand people—a basic concern in building trust, respect, and ultimately, commitment (Gardner, 1993, cited in Day, 2001: 585). Key components of interpersonal competence include social awareness (e.g. empathy, service orientation, and developing others) and social skills (e.g. collaboration and cooperation, building bonds, and conflict management) (Goleman, 1995; McCauley, 1998, cited in Day, 2001: 585). That is the idea that effective development best occurs in an interpersonal (i.e. social) context (Day, 2001: 585).

What is less clear is how this type of interpersonal effectiveness is distinctive from the interpersonal effectiveness of a manager (Campbell *et al.*, 2003: 32). Some scholars see little difference between leaders and managers, such as Bass, 1990; Yukl, 1994, cited in Campbell *et al.* (2003: 4).

Many others argue that managers and leaders differ in their motivations, behaviors, perspectives, and their approach to change and in the processes they emphasize (Kotter, 1987; Day, 2001; Hollenbeck and McCall, 1999; Bennis and Nanus, 1985; Zalesnik, 1977, cited in Campbell *et al.*, 2003: 32). Hence a more sophisticated conceptualization of leadership development needs to address this issue (Campbell *et al.*, 2003: 5) so as to distinguish between interpersonal development particularly relevant to leadership and interpersonal development broadly relevant to management (Campbell *et al.*, 2003: 33).

Cognitive Development

Another emphasis on leadership development centers on the improvement of certain cognitive abilities, particularly those linked to problem detection, problem analysis and problem solving, and additional focus on the development of creativity (Hollenbeck and McCall, 1999, cited in Campbell *et al.*, 2003: 33). These skills complement the person's analytical and evaluation skills (McDonald-Mann, 1998, cited in Campbell *et al.*, 2003: 33).

However the development of problem-solving and related cognitive skills is true for management development as well as leadership development (Campbell *et al.*, 2003: 5). In this regard, as with interpersonal skills, a leadership development model wishing to distinguish between leaders and managers ideally would also suggest how the problem-solving and cognitive skills of leaders differ from those expected of individuals holding managerial and supervisory positions (Campbell *et al.*, 2003: 5).

Communication Development

A fourth emphasis in leadership development centers on the enhancement of communication skills (Campbell *et al.*, 2003: 33). Communication plays a central role in several important transformational and charismatic leadership models (Bass, 1985; Burns, 1978; Yukl, 1994, cited in Campbell *et al.*, 2003: 33).

Transformational models emphasize how certain leaders are able to influence their followers by inspiring them to achieve a vision of the future, through generating motivation and commitment by tapping into strongly held ideals and values such as loyalty and patriotism (Campbell *et al.*, 2003: 33). This requires a high degree of communication skill (Campbell *et al.*, 2003: 33). Similarly, charismatic individuals are often described as having extraordinary social influence because they are especially effective in communicating to others their strong convictions about what the future should be like; and in communicating confidence about their ability to enact that future (Campbell *et al.*, 2003: 33).

Skilled communication, allows the individual to gain potential followers' trust, admiration and identification; this helps the communicator create enthusiasm and excitement where there was none; helps make routine work seem significant; helps arouse achievement and affiliation motives, and helps make the setting of high expectations about performance seem necessary and appropriate (House, 1977; Yukl, 1994, cited in Campbell *et al.*, 2003: 34).

Task Specific Development

Relevant research suggests that effective leadership development should include relevant technical and professional training (Burke, 1982, cited in Campbell *et al.*, 2003: 34). An individual's progression through a series of challenging job assignments has developmental impact, both in learning specific task skills and in learning new organizational perspectives (McCauley, 1998, cited in Campbell *et al.*, 2003: 34).

Task specific skills may also be influentially important because of the expertise they bestow on the individual (French and Raven, 1968; Katz and Kahn, 1978, cited in Campbell *et al.*, 2003: 34). Specific expertise often gives an individual the ability to facilitate the work of others (e.g. by providing advice, suggestions or guidance) (Campbell *et al.*, 2003: 34). Several important leadership theories argue that, under appropriate conditions, individuals gain influence by structuring tasks and clarifying objectives (e.g. Fiedler and Garcia, 1987; Fiedler *et al.*, 1976, cited in Campbell *et al.*, 2003: 34), by resolving ambiguity about how to proceed (e.g. Hersey and Blanchard, 1993, cited in Campbell *et al.*, 2003: 34) and by being directive (e.g. House and Mitchell, 1975, cited in Campbell *et al.*, 2003: 34).

It can be concluded that expertise allows the individual to do these things more effectively and doing things more effectively is the main focus of leadership development (Campbell *et al.*, 2003: 34).

The Different Leadership Development Processes (How to Develop?)

Campbell *et al.* (2003:1) identifies five approaches to leadership development focused on developing: 1) intrapersonal attributes; 2) interpersonal qualities; 3) cognitive abilities; 4) communication skills; and 5) task-specific skills. These approaches are discussed as follows:-

Mentoring and Modelling

Mentoring is typically defined as a committed long term relationship in which a senior person (student) supports the personal and professional development of a junior person (junior student) (Hernez-Broome and Hughes, 2004: 24). It may be a formal program or a much more informal process. Formal programs refer to the assigned relationships designed to promote the development of individuals and informal relationships develop on their own. (Hernez-Broome and Hughes, 2004: 26). Recognizing the value that students gain as mentors, HEIs are increasingly looking at ways to formalize these programs as part of their leadership development efforts (Hernez-Broome and Hughes, 2004: 25).

In well designed mentoring programs there are program goals, schedules, training (for student mentors and junior student mentees) and evaluation (Hernez-Broome and Hughes, 2004: 24). Mentors inspire their mentees to follow their dreams. Cusanovich and Gilliland (1991: 5) state that a “mentoring relationship involves mentors acting as close, trusted, and

experienced colleagues and guides. It is recognized that part of what is learned in graduate school is not cognitive. It is socialization to the values, practices, and attitudes of a discipline and university; it transforms the student into a colleague” (Cusanovich and Gilliland, 1991: 5). Mentors aid in the socialization process by “instilling core values in newcomers” (Campbell *et al.*, 2003: 1).

For example, as part of their socialization process, mentors typically expose new recruits to the institution's traditions, heroes, and history in an effort to pass on core values thought worthy of emulation (Ritti and Funkhouser, 1987: 24). Active modeling on the part of the student as a mentor reinforces the desired values of an institution on an on-going basis (Argyris and Schon, 1978: 42).

Mentors are needed to offer advice and guidance in academic matters. In addition, the mentor becomes a valuable support person for the mentee and he or she can assist the latter in finding university resources such as funding for research support, the mentor can also help the mentee in becoming a legitimate member of the department (Cusanovich and Gilliland, 1991: 6).

Formal Training

Higher Education Institutions (HEIs) have used formal training programs for over thirty years to develop in students conceptual, analytical and interpersonal skills associated with leadership development. Initially, such programs were concentrated in major universities, but in time a number of corporations (e.g. General Electric and PepsiCo) established their own internal programs, shaped specifically to their needs (Hollenbeck and McCall, 1999, cited in Campbell *et al.*, 2003: 32).

Typically, these programs use lectures, case studies, role-plays, behavioral role-modeling and simulations to develop the selected skills (McDonald-Mann, 1998, cited in Campbell *et al.*, 2003: 33). For problem-solving and interpersonal skills specifically, the training programs typically use simulations of "real-world" organizational situations. Individuals might also analyze business cases and incidents, role-play difficult or sensitive interactions, function as members of hypothetical project groups, and contribute as team members in competitive business games (Campbell *et al.*, 1970, cited in Campbell *et al.*, 2003: 33).

Planned Job Assignments or Experiences

Empirical evidence suggests that this method is particularly useful for developing an individual's interpersonal skills such as teambuilding and conceptual skills such as strategic thinking (McCall *et al.*, 1988, cited in Campbell *et al.*, 2003: 36). The underlying assumption is that early exposure to tough job challenges, where failure is possible and its consequences real is critical for leadership development (Campbell *et al.*, 2003: 36).

To insure developmental effectiveness job assignments must be challenging but within the person's capabilities; and that the individual has the available supportive mentors who can provide constructive feedback and assignment-relevant expertise (Hill, 1998, cited in Campbell *et al.*, 2003: 36).

This method therefore assumes that the organization can afford to treat the individual's mistakes and errors as investments rather than as costs (McCauley *et al.*, 1998, cited in Campbell *et al.*, 2003: 37).

Formal Feedback

This method centres on providing the individual with various kinds of feedback:-

- The person's strong and weak job performance areas,
- On a desired set of leadership competencies,
- The person's current standing on generally accepted leadership and management practices

(Hollenbeck and McCall, 1999, cited in Campbell *et al.*, 2003: 38).

Feedback facilitates development as it motivates a desire for change in the individual and points the person in the appropriate direction (Hollenbeck and McCall, 1999, cited in Campbell *et al.*, 2003: 38). However if the person's motivation to change is lacking, or if the feedback itself is confusing or contradictory, then development is not likely to occur (Campbell *et al.*, 2003: 38). As with planned job assignments, the feedback method equates leadership development with individual development, which is with individual learning and growth (Campbell *et al.*, 2003: 38).

Reflective Self Evaluation

Reflective self-evaluation acknowledges that leadership development requires more than simply exposing individuals to a set of values, or pushing them through a set of challenging, stretching experiences (Campbell *et al.*, 2003: 38).

Campbell *et al.* (2003:38) suggest that leadership development also requires that individuals make time for on-going self-reflection; that they set aside specific periods for analyzing and understanding the bases of their own particular leadership successes and failures.

For these reasons reflective self evaluation forms an integral component of the other methods mentioned above. Research indicates that self-evaluation plays a key role in fostering an upward cycle of learning.

The role of higher education in leadership development

Increasingly, higher education is being turned to as a source for potential change given its significant role in developing leadership capacity among today's youth (Astin and Astin, 2000, cited in Dugan and Komives, 2007: 8). Additionally, research indicates that students can and do increase their leadership skills during their college years (Pascarella and Terenzini, 2005, cited in Dugan and Komives, 2007: 8) and that increases in leadership development in turn enhance the self-efficacy, civic engagement, character development, academic performance, and personal development of students (Benson and Saito, 2001, cited in Dugan and Komives, 2007: 8).

Leadership can be learned, but not necessarily through the class room; individuals must teach themselves by doing it, observing it and interacting with others (Hill, 2005: 28). The most powerful learning experience occurs through "stretch assignments" (Hill, 2005: 28). Assignments that offer some autonomy so that an individual has the opportunity to decide what to do (planning) and how to do it (mobilize people to get it done) are an important preparation for an individual who wants to become a leader (Hill, 2005: 27).

There is a crisis in leadership in many sectors of society today and higher education is not immune to these concerns (Hill, 2005: 30). We need to build communities of scholars who are leaders willing to learn and tackle together the challenges of society (Hill, 2005: 30).

RESEARCH METHODOLOGY

Research Population and Sampling

The population for the current research will be the students at the HEI who occupy leadership positions. There are ten leadership portfolios in which 1795 student leadership positions are made available at the institution, which means there is approximately a one in three chance that a student can get leadership experience. These portfolios are as follows:

- Leadership through the Students Representative Council
- Leadership in Halls of Residence
- Leadership in Sport
- Leadership through University Societies
- Leadership through the Class Representative system
- Leadership through Community Engagement
- Leadership through Sub-Wardening
- Leadership through the Academic Mentoring system
- Leadership through the Tutorial system
- Leadership through the Post-grad Liaison Committee

For the purpose of this research convenience sampling was used to identify members of the sample population. The sample for the current research will be twenty students per leadership portfolio (20 students x 10 leadership portfolios = 200 students).

Data Gathering Process

Data was collected through various methods, both qualitative and quantitative in nature. Focus groups and a questionnaire including a six point Likert scale and open ended question were used to collect data.

Focus Groups

With regards to the current research, one focus group consisting of the research team and twenty student leaders (two students per leadership portfolio) were used to gather information about the leadership opportunities provided by the institution as well as the development of the skills required to be an effective leader.

Questionnaires

The questionnaire was based on a six point likert scale which was descriptive in nature and ranged from 1 representing 'no extent' to 6 representing 'a great extent'. The questionnaire was adapted from the Amos Skills Development Questionnaire in accordance to Campbell *et al.* (2003:1) five approaches and processes required for effective leadership development.

An open ended question was also included in the questionnaire and it asked the student leaders to explain what the institution has done to prepare them for leadership positions in the future. The information obtained from the open ended questions was categorized into relevant themes. In determining these themes, the research team analysed the text and grouped those words that occurred most frequently into categories.

Twenty students from each of the ten leadership portfolios were requested to fill out the questionnaire. Of this amount the researchers received 160 completed questionnaires, a response rate of 80%.

Data Analysis

With regards to the information gathered from the focus groups and the open ended questions, the data was vast. In order to make sense of this vast amount of data the research team condensed and transcribed the data into common or main themes that were shown to emerge. This was done by typing out the data into a Microsoft Word document, and then common words or paragraphs were noted, thereby reducing the data into a more valuable form of text.

The common themes that emerged from the qualitative data were then grouped according to Campbell *et al.* (2003: 1) five essential skills required of effective leaders. What is most interesting to note is that the data (themes that had emerged) significantly matched the categories mentioned by Campbell *et al.* (2003:1) such that in some cases the researcher did not have to transcribe the entire body of text but merely just copy the theme into the relevant category.

With regards to the questionnaire, the data was captured in a Microsoft Excel Spreadsheet. The data was then coded and the information was imported to Statistica 8 which is a statistical data analysis program.

Statistica 8 was then used to summarise the information from the questionnaire into frequency tables and histograms. Further analysis included descriptive statistics whereby Statistica 8 was used to derive correlations between the five leadership skills.

Reliability and validity

The reliability and validity of research results are very important aspects to be considered when evaluating a research instrument (Booth, 1995, cited in Van Stuyvesant Meijen, 2007: 102).

The reliability of the questionnaire used in this research was assessed through the use of Cronbach's Alpha which measures the internal consistency of the instrument and refers to the degree to which the measuring instrument items are homogenous and reflect identical underlying constructs (Cooper and Schindler, 2006, cited in Van Stuyvesant Meijen, 2007: 102). Bryman and Bell (2007, cited in Van Stuyvesant Meijen, 2007: 102), state that Cronbach's Alpha is a commonly used test of internal reliability, which essentially calculates the average of all possible split-half reliability coefficients.

The Cronbach Alpha, once computed, will produce a value that varies between 1 (representing perfect internal reliability) and 0 (representing no internal consistency). According to (Sekaran, 2000: 312) the closer the reliability coefficient is to 1.0 the better and in general reliabilities between 0.7 and above are considered good, whilst reliabilities lower than 0.6 are considered to be poor. Internal consistency was found throughout the five sections of the questionnaire.

With regards to the current research, the validity of the measuring instruments are accurate and the use of multiple sources of information such as open ended questions, focus groups and questionnaires were used. Evidence to this can be seen in the discussion section which shows that the student leaders have developed the five essential skills outlined by Campbell *et al.* (2003:1).

RESEARCH FINDINGS AND DISCUSSION

Given the literature review this section is concerned with the presentation and discussion of the findings. Twenty students from each of the ten leadership portfolios were requested to fill out the questionnaire. Of this amount the researchers received 160 completed questionnaires, a response rate of 80%. The discussion and findings will be examined according to Campbell's five leadership approaches and processes.

Leadership Development Approaches (What to develop)

Intrapersonal Skill

In the intrapersonal skill category 56% of the respondents felt they had developed the intrapersonal skill to a large extent, 35% of the respondents believed they had developed this skill to some extent, 5% of the respondents believed they had developed this skill to a great extent and 4% of the respondents felt they had developed this skill to a less extent. Therefore, from these findings it can be concluded that 96% (i.e. 56% + 35% + 5%) of the respondents felt they have developed the intrapersonal skill namely self-insight, self regulation and moral character as identified by Campbell *et al.* (2003:3).

Further evidence that respondents have developed the intrapersonal skill is illustrated in their responses to the open-ended question of the research instrument:-

"The institution has been able to prepare me with the work load and provide opportunities leadership, helping with time-management."

"The institution has taught me to be more confident in ourselves and learnt a lot about working with other people and understanding us."

"I have found myself."

"The role of sub warden was a challenging task which helped me develop some necessary skills like decision making."

Through statistical analysis, we determined a correlation among the variables. The intrapersonal variable correlates strongly with the task specific variables (0.6). Day (2001, cited in Campbell *et al.*, 2003: 30) confirms this correlation by stating that intrapersonal skills are on an individual level and task specific skills may be influentially important because of the expertise they bestow on the individual (French and Raven, 1968; Katz and Kahn, 1978, cited in Campbell *et al.*, 2003: 34). McCauley *et al.* (1998, cited in Campbell *et al.*, 2003: 34)

further reaffirms the correlation between the intrapersonal and task specific variables by stating that an individual's progression has developmental impact, both in learning specific task skills and in learning new perspectives.

Interpersonal Skill

In the interpersonal category 54% of the respondents felt they had developed this skill to a large extent, 26% believed they had developed this skill to some extent, 16% felt they had developed this skill to a great extent, 2% stated they had developed this skill to a less extent, and 0.73% of the respondents believed that they had developed this skill to a lessor extent. From these findings it can be concluded that 96% (i.e. 54% + 26%+ 16%) of respondents felt they have developed the interpersonal skill.

Further evidence that respondents have developed the interpersonal skill is illustrated in their responses to the open-ended question of the research instrument:-

“Being place in a diverse university I have learnt to respect others’ view and opinions and this has helped in working together with people in a positive way”.

“Given me the opportunities to lead groups, be part of and work in groups, take leadership positions.”

“Understand people better. Improved people skills.”

“University life however builds the leadership characteristics i.e. time management, conflict management and decision making.”

The interpersonal variable correlates strongly with the communication variable (0.6). Campbell *et al.* (2003:33) provides evidence to the correlation between the interpersonal variable and communication variable by stating that charismatic individuals are often described as having extraordinary social influence because they are especially effective in communicating to others.

Cognitive Skill

In the cognitive category, 46% of respondents believed that they had developed this skill to a large extent, 32% of the respondents felt that they had developed this skill to some extent, 14% felt they had developed this skill to a great extent and 7% of the respondents believed

that they had developed this skill to a less extent. Therefore, from these findings it can be concluded that 92% (i.e. 46% + 32% + 14%) of respondents felt they had developed the cognitive skill.

Further evidence that respondents have developed the cognitive skill is illustrated in their responses to the open-ended question of the research instrument:-

“Leadership gave me the experience to interact with people, improve conflict resolution and my ability to plan and execute.”

“I have developed the ability to work under immense pressure and minimizing procrastination with regard to getting the tasks done.”

The cognitive variable correlates strongly with intrapersonal variables (0.5), followed closely by the task-specific variable (0.51). McDonald-Mann (1998, cited in Campbell *et al.*, 2003: 33) confirms the correlation between the cognitive and intrapersonal variables by stating that cognitive skills complement the person’s analytical and evaluation skills, aspects that are intrapersonal to the individual. Several important leadership theories provide evidence to the correlation between the cognitive and task specific variables by indicating that by structuring tasks and clarifying objectives (e.g. Fiedler and Garcier, 1987; Fiedler *et al.*, 1976, cited in Campbell *et al.*, 2003:34) as well as resolving ambiguity and problems about how to proceed (e.g. Hersey and Blanchard, 1993, cited in Campbell *et al.*, 2003:34) individuals gain influence and essential cognitive skills.

Communication Skill

In the communication category, 54% of the respondents felt that they had developed this skill to a large extent, 25% believed that they had developed this skill to some extent, 18% believed that they had developed this skill to a great extent and 3% believed that they had developed this skill to a less extent. From these findings it can be concluded that 97% (i.e. 54% + 25% + 18%) of respondents felt they had developed the communication skill.

Further evidence that respondents have developed the communication skill is illustrated in their responses to the open-ended question of the research instrument:-

“Living in residence and going for tuts has taught me to communicate effectively and efficiently with people from different social backgrounds and different cultures.”

“My ability to communicate has also improved due to making presentations in class and discussions in house committees.”

“The leadership opportunities at the institution gave me the opportunity to voice my opinions assertively.”

The communication variable correlates strongly with the task-specific variable (0.6). Evidence to this correlation is provided by the fact that specific expertise often gives an individual the ability to facilitate the work of others (e.g. by providing advice, suggestions or guidance) (Campbell *et al.*, 2003: 34). Furthermore the communication variable correlates closely with the interpersonal variable (0.6). Goleman (1995; McCauley, 2000, cited in Day, 2001: 585) provides further confirmation of the correlation between the communication and interpersonal variable by recognising that the key components of the interpersonal skill include social awareness namely, empathy and developing others as well as social skills, namely, cooperation, building bonds and conflict management which require effective communication.

Task specific Skill

In the task-specific category 44% of the respondents believed that they had developed these skills to a large extent, 28% felt they had developed this skill to some extent, 14% stated that they had developed this skill to a less extent, 13% felt that they had developed this skill to a great extent, and 0.73% believed that they had developed this skill to a lessor extent. From these findings it can be concluded that 85% (i.e. 44% + 28% + 13%) of respondents felt they had developed task specific skills.

Further evidence that respondents have developed the communication skill is illustrated in their responses to the open-ended question of the research instrument:-

“I am fully aware of the social and formal aspects when making and implementing decisions as well as when planning.”

“I have also learnt to set my self clear guidelines in order to achieve various goals.”

“The role of sub warden was a challenging task which helped me develop some necessary skills like planning and organising.”

The task-specific variable correlates strongly with the intrapersonal variable (0.6). Campbell *et al.* (2003:34) identifies the importance of the correlation between the task specific and

intrapersonal variables by indicating that intrapersonal development is important as it presumably allows the person to execute various social roles and tasks more effectively (Campbell *et al.*, 2003: 1).

Leadership Development Processes

Campbell *et al.* (2003:34) further proposed various methods, namely mentoring, formal training, planned job assignments, formal feedback and reflective self-evaluation, by which the intrapersonal, interpersonal, cognitive, communication and task specific skills can be developed.

Tutoring and Sub-wardening

Mentoring is typically defined as a committed long term relationship, formal or informal, in which a senior person supports the personal and professional development of a junior person (Hernez-Broome and Hughes, 2004: 24). At the institution mentoring takes the form of tutoring and subwardening. In their responses to the open-ended question of the research instrument, respondents indicated the importance of the mentoring system, in particular the tutoring and sub-warden systems, as part of their leadership development efforts.

A tutor is a senior student who facilitates the learning of junior students with regards to a particular subject. A sub-warden is responsible for ensuring the well being of students within the residence system by carrying out administrative duties, ensuring safety and security as well as student discipline. The value that tutoring and sub-wardening to student leaders is evident in the following responses to the open ended question of the research instrument:-

“Tutoring is a fantastic method of building leadership qualities as the tutor is leading group knowledge, debates, and facilitating extra understanding.”

“Tutorials and various lectures provide the opportunity to develop and enhance teamwork and leadership skills.”

“I am currently a subwarden and it is a great experience for leadership skills development. R I am prepared for the future through positions I have had so far.”

The institution has recognized the value that student leaders gain as mentors and should look at further ways to increase this important leadership development process as advocated

by Hernez-Broome and Hughes (2004: 25) that HEI should increasingly look at ways to formalize these programs as part of their leadership development efforts.

Leadership Development Workshops

Formal executive training makes use of lectures, case studies, role-plays, behavioural role-modelling and simulations to develop selected skills namely cognitive and interpersonal skills (McDonald-Mann, 1998, cited in Campbell *et al.*, 2003: 33). Formal executive training at the institution takes the form of workshops for students in leadership positions. These workshops equip students with problem solving techniques through the use of case studies and further aid in developing social skills between student leaders. Evidence with regards to workshop training is marked in the following responses to the open ended question of the research instrument:-

“I attended workshops provided by the university and my hall warden.”

“SRC have had leadership workshops, where we are taught how to conduct ourselves in a position of leadership.”

The institution has recognised the importance of formal training programs in the form of workshops because as identified by Hollenbeck and McCall (1999, cited in Campbell *et al.*, 2003: 32) these aid in the enhancement of conceptual, analytical and interpersonal skills associated with leadership development. However despite the efforts geared towards leadership development workshops it was indicated in the focus group held, that these workshops were only available to specific leadership portfolios namely house committees and tutors.

Planned Tasks and Assignments

Planned tasks and assignments at the institution take the form of group essays, projects and events management. Student leaders at the institution are required to arrange social functions and formal events for both the members they serve and the committees they lead. Planned job assignments at the institution are evident in the following responses to the open ended question of the research instrument:-

“Being part of groups for assignments and res life in general all helped me learn”

“By ensuring that assignments are done in groups I have learnt to work with others towards reaching set targets”

“Being involved in the committee of the Canoe Club has taught me many skills. First of all patience, dealing with people you might not like but have to deal with. Situations arise when there is a race scheduled for the next day and a member has forgotten to book a trailer or tent and a plan has to be made now or else the entire weekend will be a total failure.”

This indicates that planned job assignments are particularly useful for developing an individual’s interpersonal skills such as teambuilding and conceptual skills such as strategic thinking (McCall *et al.*, 1988, cited in Campbell *et al.*, 2003: 36).

Formal and Informal Feedback

Feedback facilitates development as it motivates a desire for change in the individual and points the person in the appropriate direction (Hollenbeck and McCall, 1999, cited in Campbell *et al.*, 2003: 38).

At the recognised institution feedback to student leaders is given formally through evaluations, committee meetings and annual general meetings (AGM) held by societies and sports clubs alike. There are specific hierarchies of which student leaders form a part. A student indicated in the focus group the importance of these hierarchies in providing support services to students as well as student leaders.

Responses given in the focus group held indicated the use and the importance of informal feedback in aiding with leadership development at the institution. Student leaders at the focus group highlighted the importance of talking to fellow students, listening to people, taking advice as well as criticism from peers. These aspects emphasize the use of informal feedback in ensuring student leaders are effective in their respective roles.

Self Evaluation

Campbell *et al.* (2003:38) suggest that leadership development also requires that individuals make time for on-going self-reflection; that they set aside specific periods for analysing and understanding the bases of their own particular leadership successes and failures.

The current research took cognisance of the aspect of self reflection as evidenced in the questionnaire by asking student leaders whether they have awareness of their self in terms

of their strengths and weaknesses. Further evidence can be provided below as taken from the open ended questions of the research instrument:-

“I have found myself.”

“Help me identify some of my strengths and weaknesses”.

Reflective self-evaluation acknowledges that leadership development requires more than simply exposing individuals to a set of values, or pushing them through a set of challenging, stretching experiences (Campbell *et al.*, 2003: 38). The onus is on the individual to ensure self-reflection occurs. For these reasons reflective self evaluation forms an integral component of the other methods mentioned above.

CONCLUSION

From the findings it was identified that the five skills necessary to be an effective leader as identified by Campbell *et al.* (2003: 1) namely intrapersonal, interpersonal, cognitive, communication and task specific skills have been developed amongst the student leaders at the institution. This indicates that the student leaders' development in each of the above mentioned areas makes them effective leaders according to Campbell *et al.* (2003: 1).

The correlations between the five skills identified by Campbell *et al.* (2003: 1) indicate that the development of a particular skill does not occur in isolation. The development of a particular skill is likely to result in the development of the remaining four skills at varying degrees.

Tutoring and sub-wardening, leadership development workshops, planned tasks and assignments as well as formal and informal feedback have been identified as the methods by which student leaders are developed.

RECOMMENDATIONS AND FUTURE RESEARCH

Recommendations

The research team found that the student leaders thought the focus groups were useful as it gave them the opportunity to express their ideas about their experiences as leaders and to also indicate areas of improvement required by the HEI. It is recommended that regular focus groups take place throughout the year in order to understand the leadership system, those aspects that work well and any difficulties that arise.

During the course of the research it was found that the students required more information about the various leadership opportunities available. In this regard a leadership booklet explaining the responsibilities of each leadership position may prove to be very useful. Furthermore it was noted that leadership workshops were only provided for specific leadership portfolios with a large number of student leaders requesting workshops to be held to prepare them for their leadership positions.

Future Research

Research in the area of leadership development in HEIs is relevant and necessary as it is their objective to produce graduates who are employable. Here the focus is on leadership development at a HEI. As a result the universities need to focus on the appropriateness and effectiveness of their leadership development in order to meet the needs of organizations. Due to the ever changing business environment, there is consequently scope for continuous evaluation of the alignment between leadership development at universities and the requirements of organizations.

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THE PROFILE OF BUSINESS MANAGEMENT ACADEMICS AT UNIVERSITIES IN SOUTH AFRICA

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ABSTRACT

The need for the appointment and promotion of Black -, Indian – and Coloured academics, or the designated groups as defined by the department of Labour in Business Management is eminent. In addition, according to the Employment Equity Act (Republic of South Africa, 1998a), employers have to submit employment equity plans and have a responsibility to ensure equity in the workplace. This paper is an attempt to determine the profile of Business Management Departments at universities and the level of appointments and positions filled by academics from the designated groups.

The findings indicate that at 40% there is a serious lack of academics from the designated groups as opposed to 60% white. The situation is exacerbated in the positions ranging from Senior Lecturer to Professor. One of the reasons is that a doctorate is a requirement at the majority of universities for appointment as Senior Lecturer and higher. Three percent of all academic staff in Business Management are from the designated groups and have a doctorate, as opposed to 29% of the white academics. Nine percent of all academics with a

doctorate are from the designated groups and 91% with doctorates are white. With regard to a Masters degree the numbers of staff from the designated - and white groups is 29% and 25% respectively.

The findings also indicate that at 57% the majority of academics in Business Management are male as opposed to 43% female. Representation of females from the designated groups is the lowest at 14% with white males the highest at 31%.

There is an overall average of 17% vacancies although the vacancies were at only seven of the universities that participated. Vacancies fluctuated from no vacancies to 12 vacancies at one university.

The average research output of all the academics at all the participating universities combined is .54 and varies from an average of between 0 and 1.12 per academic at the respective participating universities. As research output is produced primarily by Senior Lecturers, Associate Professors and Professors (43% of the academics are at these levels) the average output is 1.25 units.

The results clearly indicates that the appointment levels of academics from the designated groups, especially females are far below target and that an attempt should be made to attract candidates from these groups from private – and public sectors to universities.

INTRODUCTION

Appropriately educated, trained and committed academics are essential for academic institutions to perform well in their core areas of specialization, tuition and research. Tertiary education plays a crucial role in the education of future generations and in many ways is essential to the development of a country. In a diverse country such as South Africa it is also expected that the composition of academics should be representative of the racial distribution of the country or at least the specific community in which a university operate. This is unfortunately seems not to be the situation in the field of Business Management and related fields.

There is a dearth of Black, Indian and Coloured academics at Business Management and related departments and schools at universities. It remains a problem to attract, appoint and retain people from the designated groups to universities (HESA 2009:2). One of the reasons might be the relative scarcity of people in the field of management. According to the Department of Labour National Scarce Skills List of 2008 in excess of 17 000 positions have

to be filled in specialisation areas referring specifically to General Management and Business Management. In addition it has also been found that remuneration and working conditions in academic institutions in developing countries are inadequate (Altbach, 2002:3).

There is a strong relation between higher education, the performance of a nation and national development. According to the Human Development Index of the United Nations Development Programme the achievement of a country is determined by the level of its health and knowledge as well as the standard of living of the people. South Africa rates at 121 of 171 countries with a medium developmental level (Rumbley, Pacheco & Altbach, 2008:18). When compared to other countries South Africa has a lower than average entry level salary for academic staff (Rumbley *et al* 2008:21). Yet with regard to top-level salaries of academics South Africa rates amongst the countries with a high Human Development Index for example more than the United Kingdom and New Zealand and slightly less than Australia and the United States. The overall average monthly salaries of South African academics are in line with the international average and in close proximity to countries rated as high on the Human Development Index such as France, Japan, Germany and Malaysia (Rumbley *et al* 2008:22). Lastly the difference between the top – and entry level salaries is 139% in South Africa and is amongst the countries with the highest differences (Rumbley *et al* 2008:25). These statistics are a clear indication that at the entry level an academic position is not as desirable as at the top levels.

Due to the identified and possibly various other reasons tertiary education does not seem to attract and be a first choice career of qualified Black, Indian or Coloured people or designated groups, as defined by the Department of Labour. Experience seems to indicate that people from designated groups with Business Management and Management related qualifications ranging from National Diplomas through to Doctorates are absorbed primarily by the private – and public sectors and that limited candidates are available to Higher Education (Kubler & Lennon (2007:iii).

PROBLEM STATEMENT

The problem is the lack of appropriate candidates and applications from candidates from designated groups for appointment in academic positions (HESA 2009:2) in the field of Business Management and related fields at universities in SA. Qualifications, teaching experience and proven research output are criteria that determine whether an applicant can be appointed (Universities Appointment and Promotions Criteria 2010). This means attracting candidates to universities seems to be a problem as the salaries do not commensurate with the stringent appointment criteria as opposed to the private – and public

sectors. The working conditions and salaries are also not attractive enough to draw qualified candidates to academia (Altbach 2002) and at the entry level it is even less attractive in South Africa than the private – and public sectors (Rumbley *et al*, 2008:25).

In addition to advertisements in the press Heads of Departments are required to search suitable academics at other universities as well as in the private – and public sectors. Due to the criteria related to research output any suitable candidate from the level of senior lecturer and higher will usually be found only at other universities. This is as a result of requirements for the highest level of qualifications combined with research output in the form of academic articles in journals and conference papers in proceedings as accredited by the Department of Education and international ISI-ISSN lists of publications (Universities Appointment and Promotions Criteria 2010). These are not a specialization areas of the private – and public sectors and therefore do not form part of the expertise of possible candidates from outside academia. Insufficient information regarding the state of academics in Business Management and related fields at universities is a problem as more knowledge is required regarding what the current status of the composition of academics are to determine what exactly are available to universities.

RESEARCH OBJECTIVE

The objective of this study was to determine the profile of academic staff in Business Management and related fields at Universities in South Africa. This would make it possible to determine the position of academics from the designated groups in Business Management and related fields at universities.

The null hypothesis (Ho) indicates that there are no differences or between groups whereas the alternative hypothesis (Ha) indicates a difference or relationship between variables.

Hypotheses to be tested:

H1o: There is an insignificant difference between the numbers of academics from the designated groups and whites with a Masters degree. (Ha1: there is a significant difference)

H2o: There is an insignificant difference between the numbers of academics from the designated groups and whites with Doctorates. (Ha2: there is a significant difference).

H3o: There is an insignificant difference between the percentage of males and females academics. (H5a: there is a significant difference academics)

H4o: There is an insignificant difference between the percentage of academics from the non-designated – and white group. (H4a: there is a significant difference)

H5o: The level of vacancies in Business Management departments is insignificant. (H6a: the level of vacancies is significant)

LITERATURE REVIEW

Salaries of graduates in the private – and public sectors exceeds that of salaries of academics by far (Kubler & Lennon 2007:iii). Higher Education South Africa (HESA) also determined the recruitment, attraction, retention and appropriate remuneration of academic staff in the Higher Education sector as important objectives. This is even more relevant in the pursuit of attracting and developing appropriate academic staff from the designated groups (HESA 2009:2).

A comparison of the salary ranges of universities, private – and public sectors revealed that the highest academic salary of any of the academic post levels (lecturer, senior lecturer, associate professor and professor) is equal to between 77% and 87% of the lowest salary of a similar post in the field of Business Management and Management in the private and public sectors. This means appointments at universities are at less than the lowest salary range of the private – and public sectors yet the criteria for appointment seems to be much higher or more complicated. (Nieuwenhuizen 2009:319).

A study by Jooste & Petzer (SAIMS 2009) found that in the Marketing and Retail specialization areas 33% of the academics were Black, Coloured or Indian as opposed to 67% White. Of the 131 academics included in the study 11% of the doctorates are Black, Coloured and Indian academics and 89% of the doctorates in the Marketing and Retail field are White. The highest qualification of 44% of the White academics and 56% of the Black, Coloured and Indian academics is a Masters degree. The majority (83.2%) of all the academics combined has Masters and Doctorate degrees and 55% are appointed in a Senior Lecturer, Associate Professor or Professor position.

According to Altbach (2002:3) “many developing countries are building up large and complex academic systems, including research universities. Yet very little is known about the professionals who are responsible for teaching and research in these universities.” He also states that the autonomy of academics has been seriously limited over the past years and thereby one of the primary attractions to academia has been, to a large extent eliminated. Mass higher education also caused deterioration in conditions of academic employment. (Altbach 2002:4)

In addition the quest for publications as important criteria for appointment in and promotion to positions from Senior Lecturer and higher levels is problematic. As indicated by Teferra and Altbach (2002) the publication of articles in journals are biased against academics from

developing countries. Selection criteria of internationally acknowledged journals are developed according to interests and methodologies of developed countries. This often renders research by academics from developing countries irrelevant and/or inappropriate as academics from developed countries usually are not or are at most less interested in research from developing countries.

Good academic journals do exist in developing countries but these are often not acknowledged or respected by academic institutions in their own countries as validation from other countries enjoys prominence. This is problematic as international journals are extremely competitive, concerned about the topics of their own colleagues and insufficient value is placed on research topics relevant in developing countries. An additional problem is that authors from developing countries usually have to write in a language other than their first language (Altbach 2002:6).

Restrained economic performance, the possibility of a double dip and economic stagnation also leads to government fiscal cuts that has a direct impact on availability of funds for education (World Bank 2010:162). This has a direct effect on the funds available for salaries at tertiary institutions.

Scarcity, opportunities in private – and public sectors, the ability to pay higher salaries, qualification - and publication requirements are all factors that play a possible role in the search for academics from designated groups in Business Management and related fields.

RESEARCH DESIGN AND METHODOLOGY

A self administered questionnaire was e-mailed to Directors or Heads of Departments of Business Management or related fields at all South African universities. The questionnaire requested information on the profile of all relevant academics and included information on highest qualification, position, race, gender, age, areas of specialization of individual academics teaching Business Management and related subjects. In addition questions covered the research output of the relevant departments and the number of vacancies in departments. A request was also made for the submission of salary scales and appointment and promotion criteria.

Questionnaires were sent to 23 universities including the University of Cape Town, Cape Peninsula University of Technology, Central University of Technology, Durban University of Technology, University of the Free State, University of Fort Hare, University of Kwa-Zulu Natal, University of Limpopo, Mangosuthu University of Technology, Monash, Nelson

Mandela Metropolitan University, North-West University, University of Pretoria, Rhodes University, University of Stellenbosch, Tshwane University of Technology, Unisa, Vaal University of Technology, University of Venda, University of the Western Cape, Walter Sisulu University, University of the Witwatersrand, University of Zululand, and completed and returned by 13 of the Universities. Of the remaining 10 one university replied that they do not offer any Business Management and related programmes; one head of department indicated that she was prevented from participation on behalf of the university; two heads of departments indicated that due to the size of their Department Business Management (each in excess of 30 academics in the relevant department) they did not have all the information available nor the time to collate it and lastly the responsible heads of four universities did not respond. The findings are based on 13 returned questionnaires. Thirteen universities represent 57% of the population. The analysis of the composition of universities that participated in the research revealed that participation is representative of universities in the country. Three comprehensive universities, one traditionally Afrikaans university, four traditionally Black universities, one traditionally English university, two universities of technology, some very small and some very large Business Management departments and universities from all the provinces except for one participated in the study.

The 13 universities that participated in the study are:

Central University of Technology

Cape Peninsula University of Technology

Nelson Mandela Metropolitan University

Monash

Rhodes University

University of Fort Hare

University of Johannesburg

University of Limpopo

University of Pretoria

University of Stellenbosch

Vaal University of Technology

Venda University

Walter Sisulu University

Due to various reasons, including non-availability and restrictions on dissemination of the information only five universities submitted salary scales and appointment and promotion criteria.

FINDINGS

One hundred and thirty six academics from 13 universities were included in the findings. The information received where collated to determine the presence and levels of employment of academics from the designated groups in Business Management and related fields at universities. Although detailed information on all races have been submitted and are available for the analysis of the information Black, Indian and Coloured were grouped together as these are the designated groups as determined by the Department of Labour.

Gender, Race and Age

Table 1 is an analysis of the gender distribution in Business Management Departments. The majority of academics are male with 14% more males than females employed in relevant academic positions.

Table 1: Gender

Male	Female	Total
77	59	136
57%	43%	100%

In table 2 the racial distribution of academics indicates that the majority are white with 20% more White academics than Black, Indians and Coloureds combined.

Table 2: Race

Black, Indian Coloured	White	Total
54	82	136
40%	60%	100%

Age distinction is made as there is a concern regarding the predominance of mature academics and the implications on future needs. However according to this analysis it does not seem to be a problem as at 27% little more than the average of 25% per age group (20 to 30; 31 to 40; 41 to 50 and 51 to 65) fall in the older than 50 group. The age distribution of the academics is illustrated in Table 3.

Table 3: Age

50 and younger	Older than 50	Total
99	37	136

73%	27%	100%
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According to the information received the youngest academics are 23 years and the eldest 71 years.

Qualifications, Positions and Age

As qualifications, specifically Master and Doctorate degrees are key criteria for appointment and promotion in academia Table 4 provides an analysis of the highest qualifications of the academics appointed at the universities. At 53% the majority possesses a Masters degree and the highest qualification of 32% is a Doctorate degree.

Table 4: Highest qualifications

Qualification	1 st degree	Honours	Masters	Doctorate	Total
Total all universities	4	16	73	43	136
%	3%	12%	53%	32%	100%

In table 5 the levels at which academics are appointed are indicated. The majority of appointments, 47% are Lecturers with 57% at Junior Lecturer and Lecturer levels combined. Forty three percent of the academics are in positions from Senior Lecturer level upwards with 10% of all academics appointed as Professor.

Table 5: Positions ranging from Junior Lecturer (JL), Lecturer (L), Senior Lecturer (SL), Associate Professor (AP) to Professor (P).

	JL	L	SL	AP	P	
Total	14	64	35	9	14	136
%	10%	47%	26%	7%	10%	100%

An analysis was done to determine the age of the academics in relation to their positions. As indicated in Table 6 the majority of positions, 37% are filled by academics younger than 50 in Lecturer positions followed by 17% at Senior Lecturer level younger than 50. The majority of the Professors are older than 50 at 7% of the 10% academics in a Professor position.

Table 6: Age and post level

	JL	L	SL	AP	P	Total	% per age

							group
50 and younger	14 10%	50 37%	26 19%	5 4%	4 3%	99	73%
Older than 50	0 0%	14 10%	9 7%	4 3%	10 7%	37	27%
Total	14	64	35	9	14	136	
%	10%	47%	26%	7%	10%		100%

In table 7 the relation between the age of the academics and their highest qualifications are analysed. The majority of the academics (43%) have a Masters degree and fall in the age group younger than 50 followed by 17% who have a Doctorate degree and are younger than 50.

Table 7: Age and highest qualification

	1 st degree	Hons	Master	Doctorate		% per age group
50 and younger	4 3%	14 10%	58 43%	23 17%	99	73%
Older than 50		2 1%	15 11%	20 15%	37	27%
Total	4	16	73	43	136	
%	3%	11%	54%	32%		100%

Gender, Race, Qualifications and Positons

In Table 8 the gender and race of academics are analysed. At 31% most academics are White males followed by White females at 29%, Black, Indian and Coloured males at 26% and lastly Black, Indian and Coloured females at 14%.

Table 8: Gender and race

	Black, Indian, Coloured	White	Total	% per gender
Male	35 26%	42 31%	77	57%
Female	19 14%	40 29%	59	43%
Total	54	82	136	

% per race group	40%	60%		100%
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From Table 9 it is clear that most academics are in possession of a Masters degree, 54% and 32% have doctorate degrees. At 30% males as opposed to 24% females with Masters and 18% males as opposed to 14% females with Doctorate degrees the qualifications of males are higher than females. This is however in line with the higher level of male academics, 57% than female academics, at 43%.

Table 9: Gender and Highest qualification

	1 st degree	Hons	Masters	Doctorate	Total	%
Male	2 1%	11 8%	40 30%	24 18%	70	57%
Female	2 1%	5 4%	33 24%	19 14%	56	43%
Total	4	16	73	43	136	
% per qualify.	2%	12%	54%	32%		100%

From Table 10 it can be seen that the difference between the highest qualifications of the race groups are small (2% - 4%) except for Doctorates. Three percent of the Black, Indian and Coloured group have Doctorates as opposed to 29% of the White group. Ninety one percent of the 43 Doctorates are held by white academics.

Table 10: Race and Highest qualification

	1 st degree	Hons	Masters	Doctorate	Total	
Black, Indian, Coloured	3 1%	9 7%	38 29%	4 3%	54	40%
White	1 1%	7 5%	35 25%	39 29%	82	60%
Total	4	16	73	43	136	
% per race	2%	12%	54%	32%		100%

According to Table 11 14% of the positions are filled by Doctorates who are in Senior Lecturer positions and 3% in Lecturer positions. Of the 44 with Doctorates 53% are in L and SL positions and 47% are in an Associate Professor or Professor position.

Table 11: Qualification and Position

	JL	L	SL	AP	P	Total	% per degree
1 st degree	3 2%	0	1 1%			4	3%
Hons	8 6%	8 6%				16	10%
Masters	3 2%	51 38%	16 12%	2 1%		72	53%
Doctorate		4 3%	19 14%	7 5%	14 10%	44	34%
Total	14	63	36	9	14	136	
% per level	10%	47%	26%	7%	10%		100%

Table 12: Race and Positions

	JL		L		SL		AP		P			% BCI vs W
BM	7	12	15	29	2	11	1	1	1	1	26	54
BF	2	=	7	=	4	=		=		=	13	=
CM	1	86%	3	46%	2	31%		11%		7%	6	40%
CF			2		1						3	
IM			2		1						3	
IF	2				1						3	
WM	1	2	16	34	15	25	6	8	8	13	46	82
WF	1	=	18	=	10	=	2	=	5	=	36	=
		14%		54%		69%		89%		93%		60%
	14	100	63	100	36	100	9	100	14	100	136	100%

The majority of Junior Lecturer positions filled is by Black, Indians or Coloureds as opposed to the rest of the positions where the majority of the incumbents are White. There are two Black Males in Associate Professor and Professor position respectively but according to the information from the questionnaires neither have a Doctorate. According to the analysis of information received this indicates that the four Black, Indian or Coloured academics that have Doctorates are in positions lower than Associate Professor.

Vacancies

At six of the 13 universities there were no vacancies. Table 13 indicates the vacancies at seven universities (54%) where there are 27 vacancies represent a 17% vacancy rate. (Total positions are $136+27 = 163$ and $27/163=17\%$)

Table 13: Combined vacancies of seven universities per level

JL	L	SL	AP	P	Total
1	7	12	4	3	27

Research output

Table 14: Total Research output for a year 2008 or 2009 per DoE units

National Conf	International Conf	DoE Journal	ISI-ISSN	Total
17.27	13.55	25.75	17.34	73.91

The distribution of research output per university varies from universities with the highest research output at 19.95 and 16.84 research units respectively. Some universities (2) had no research output.

Average DoE research output per employee for 2009 varies from 0 to 1.12 per academic at the respective universities if calculated over all levels from Junior Lecturer to Professor at each university.

The average research output of all academics at all universities is $73.91/136 = .54$. However if considered that two universities with a total of 10 academics in the field of Business Management produced no research output the average research output per individual increases to 0.63. Another approach to determine the average output per academic can be to make the assumption that research output are produced primarily by Senior Lecturers,

Associate Professors and Professors (59 or 43% of the academics are at these levels). According to this scenario the average output are 1.25 units.

Five of the 13 universities (38%) published in internationally accredited ISI-ISSN journals.

Salary scales and appointment and promotion criteria

From the appointment criteria of five universities that were submitted it could be gathered that the appointment and promotion criteria are aligned although not exactly the same. Salary scales are also relatively comparable.

DISCUSSION OF FINDINGS

Revisiting the Hypotheses:

H1o: There is an insignificant difference between the numbers of academics from the designated groups and whites with a Masters degree. (Ha1: there is a significant difference)

Based on the empirical results the null hypothesis is accepted and the alternative hypothesis rejected as the difference between the two groups is insignificant. From the designated groups 29% have a Masters degree and 25% of the whites.

H2o: There is an insignificant difference between the numbers of academics from the designated groups and whites with Doctorates. (Ha2: there is a significant difference).

Based on the empirical results the null hypothesis is rejected and the alternative hypothesis accepted as there is a significant difference between the number of academics from the designated groups and whites with Doctorates. Three percent of all academic staff in Business Management are from the designated groups and have a doctorate, as opposed to 29% of the white academics. Nine percent of all academics with a doctorate are from the designated groups and 91% with doctorates are white.

H3o: There is an insignificant difference between the percentage of males and females academics. (H5a: there is a significant difference)

The null hypothesis is rejected and the alternative hypothesis accepted as there is a significant difference of 14% with 57% male as opposed to 43% female.

H4o: There is an insignificant difference between the percentage of academics from the non-designated – and white group. (H4a: there is a significant difference)

The null hypothesis is rejected and the alternative hypothesis accepted as at 20% the difference is significant between the 60% white academics and 40% academics from the designated groups.

H5o: The level of vacancies in Business Management departments is insignificant. (H5a: the level of vacancies is significant)

The null hypothesis is rejected and the alternative hypothesis accepted as vacancies of 17% is significant.

Females are relatively well represented at 43% however only 14% of academic positions are filled by females from the designated groups whereas white males at 31% is the best represented racial and gender group. Overall 40% of academics in Business Management and related fields are from the designated groups. This clearly indicates that there is a severe shortage of female academics from the designated groups specifically but generally the composition is not representative of the racial distribution of the communities in which the universities operate or of the student profile.

In general males are better qualified than females with more males in possession of Masters as well as Doctorate degrees but the ratio is comparable to the difference between the total male and female academics. The female doctorates are, with one exception all white. Of the associate professors 11% and professors 7% are from the designated groups as opposed to 89% and 93% respectively that are white. At senior lecturer level the situation is not much better with only 31% of the positions filled by academics from the designated groups and 69% white. Only at lecturer level does it become comparable at 46% designated and 54% white. Junior Lecturers are overwhelmingly from the designated groups at 86%.

The number of people from designated groups in possession of a doctorate and with adequate research output is some of the core problems in appointing designated groups at levels higher than a lecturer. Three percent of academics in the field of Business Management are from the designated groups and have doctorates. Of all those with doctorates 9% is held by Black, Indians and Coloureds as opposed to 91% held by white academics. This is similar to the 89% whites and 11% from the designated groups as identified by Petzer & Jooste (2009) in Marketing and Retail academic departments.

At most universities a Doctorate is a pre-requisite for appointment from the level of senior lecturer and higher. In addition the research output required to be appointed at these levels (SL, AP and P) are stringent ranging from three articles in addition to a doctorate for Senior Lecturer to 15 research outputs and rated as a researcher by the NRF for a Professor.

The majority of academics are in possession of a Masters degree that renders them sufficiently qualified and experienced for appointment and promotion to a Lecturer level. However at lecturer level the salaries of academics in Business Management are far below that of salaries paid in the private – and public sectors for people with a Masters degree and even with a lower qualification. This means academics with a Masters degree and less often do not consider academia as an option or are lured to the private – and public sectors.

Universities usually assist academics to improve their qualifications but once a Masters degree is obtained a variety of opportunities often presents themselves in the private – and public sectors or even other universities.

Vacancies are another problem that is difficult to address. As the vacancies indicate a high percentage is in the positions SL, AP and P. The statistics also prove that the availability of candidates from the designated groups to fill these positions are extremely limited (in all only four or 3% doctorates from this sample). Experience has also proved that publications in accredited journals usually follow a doctorate and therefore very few published academics are from the designated groups.

MANAGERIAL IMPLICATIONS AND RECOMMENDATIONS

It is important to be realistic and acknowledge the availability and level of current and possible academics in the field of Business Management. Available and current academic staff from the designated groups complying to the appointment and promotion criteria is firstly not available to academia. Secondly they are often limited in their experience specifically with regard to the qualifications and research output requirements of academia. In the third instance their qualifications make it possible for candidates to attain better paid positions in the private – and public sectors. Thus it is important to be realistic about the availability of academic staff in Business Management.

The minimum requirements for academic positions in Business Management could possibly be reconsidered and it is recommended that a distinction be made between academics that are primarily tuition oriented and those that are research oriented. Also the example of some South African universities that require a Masters degree and not a Doctorate for appointment or promotion to Senior Lecturer positions, specifically in Business Management could be considered.

Salaries should be realistic and aligned with positions in the private sector to ensure that academia becomes a desired career path to those of the designated groups. In lieu of salaries other benefits of academic positions should be reconsidered and not eliminated. This implies that academic freedom and autonomy in the use of time are essential alternatives to high salaries. Academics in Business Management should be encouraged to be involved in the private sector. This will ensure improved experience, exposure and tuition, additional income streams, research opportunities and academic freedom.

The final suggestion is that academic positions should be structured to become a desirable opportunity for qualified people from the designated groups. To maintain the status quo will not attract the people needed as academics. Decision makers at universities should realize that those with qualifications in Business Management have a wide variety of lucrative options to consider including jobs in the private - and public sectors, their own businesses and consultancy.

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THE ROLE OF EXPERIENCE IN THE DEVELOPMENT OF SOCIAL COMPETENCIES

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ABSTRACT

The role of experience in the development of managers' social competencies has been analysed in this research. Following a multiple case study design, face-to-face interviews with service-oriented managers were held, based on the critical incident technique. Data were analysed using the open coding procedures of grounded theory. Experience was found to contribute to the development of service-oriented managers' social competencies through a process that established an awareness of unfamiliar social competencies or a reinforcement of the effects of familiar effective social competencies. The proposed process, the Social Competency Cache Development Process (SCCD Process), is the practical

outcome of the research which offers a tool to facilitate the development of social competencies through conscious leveraging of an individual's experiences.

INTRODUCTION

Managerial performance is related to the possession and utilization of competencies (Burgoyne, 1989 in Moore, Cheng and Dainty, 2002; Murray, 2003; Stuart and Lindsay, 1997). "Competencies" can be defined as "a combination of observable and applied knowledge, skills and behaviours that create a competitive advantage for an organization" (Jauhari, 2006:123). Competencies represent the synthesis of a variety of skills, technologies, and knowledge streams (Naquin and Holton III: 2006:146).

Competencies are developed by both formal and informal learning methods (Svensson, Ellström and Åberg, 2004:480). Formal learning methods include professional development programmes and educational programmes, while informal learning methods include the experiences that individuals utilize to develop competencies (Cheetham and Chivers, 2001:249).

The primary purpose of this study is to develop an understanding of the process in which experience contributed towards the development of service-oriented managers' social competencies.

This research study is set in the South African hospitality industry and specifically in the bar and/or pub sectors of this industry. The service orientation in the hospitality industry is underpinned by service encounters which are perceived to be "social in nature, because the personal mode of delivery is intertwined with the provision of the tangible thing that initiated the encounter" (Chapman and Lovell, 2006:79). Hence, bar managers manage service-orientated environments which are characterised by a social nature.

Previous research by Brophy and Kiely (2002), Kay and Russette (2000), Lockwood and Jones (1989, in Jauhari, 2006) and Tas (1988, in Jauhari, 2006), all view social competencies as essential managerial competencies required in the hospitality industry. This confirms the need for bar managers not only to have to have social competencies but also to be able to develop such skills.

To begin, social competencies and the methods used to develop such competencies will be defined. Thereafter, experience and competency development will be explored, and the research methodology and findings be presented. The SCCD Process will be recommended as a practical implication of the study.

SOCIAL COMPETENCIES

As mentioned above, competencies can be defined as a “combination of observable and applied knowledge, skills and behaviours that create a competitive advantage for an organization” (Jauhari, 2006:123). Brophy and Kiely (2002:167) define them as “the skills, knowledge, behaviours, and attitudes required to perform a role”. A competency “therefore describes a feature of a person’s ability to perform their job effectively” (Brophy and Kiely, 2002:167). According to Wickramasinghe and De Zoyza (2009:349), a competency is considered as a measurable characteristic of a person that is related to effective performance in a specific job, organisation or culture. These characteristics are defined in terms of behaviour, because competencies are behavioural, they can be developed.

According to Katz (1955:34), who is a seminal author on the topic of managerial skills, in order to be effective, managers require technical skills, human skills and conceptual skills. Human skills are considered to be the equivalent of social skills or competencies.

Social competencies are seen as “knowing and managing emotions in others”, as well as the ability to work effectively with others (Cherniss and Goleman, 2001:29). Social competencies may also be defined as the “ability to work with people” (Smit and de J Cronjé, 2002:17), and they include communication skills, social awareness, conflict resolution and motivating people (Cherniss and Goleman, 2001; McKenna, 2004:665). For Bardzil and Slaski (2003:97), social competencies comprise communication skills, empathy and emotional labour. In their emotional intelligence framework Cherniss and Goleman (2001:28) highlight social competence as an element in the form of social awareness and relationship management (Cherniss and Goleman, 2001). Social awareness can be explained as empathy, organisational awareness and service orientation (Ramo, Saris and Boyatzis, 2009:774).

DEVELOPMENT OF SOCIAL COMPETENCIES

Competencies are developed by both formal and informal learning methods (Svensson *et al.*, 2004:480). Formal learning methods include professional development programmes and educational programmes, while informal learning methods include the experiences that individuals utilize to develop competencies (Cheetham and Chivers, 2001:249). Garavan and McGuire (2001:147) are of the opinion that formal learning methods, such as individual training and workplace learning activities, are the dominant sources of competency development. It is important to recognize that although competency development may be facilitated through formal learning methods such as formal education programmes, informal learning methods may also be utilized to develop competencies (Svensson *et al.*, 2004:479).

Informal learning methods relate to the use of experience to facilitate development (Cheetham and Chivers, 2001:249).

The informal learning method of social competency development is highlighted in the realm of experiential learning. Experiential learning is founded on the concept that ideas are continuously being formed and reformed by life experiences (Cheetham and Chivers, 2001:256). Thus, learning in the experiential sense seems to be a “continuous process grounded in experience” (Cheetham and Chivers, 2001:256). This suggests that experiences represent a basis for learning and development. Experiential learning indicates that “some things can be taught in a formal way, such as data”, while other aspects “have to be learned by experience” (Barnett, Chambers and Longman, 1985:4). More specifically, Professor Morris’s Continuum of Learning suggests that concrete knowledge is learned in a formal manner whereas social and interpersonal skills are learned through experience (Barnett *et al.*, 1985:4). Hence, experience is a source of potential development.

EXPERIENCE

Experience is often used to explain variations in performance, to give the impression of expertise, to indicate time spent in a specific context, or to refer to a level of training or certification (McKnight and Sechrest, 2003:431).

For the purpose of this research, an individual experience is defined as the process of successively construing “replications of events” (Kelly, 1955:72). The combination of individual experiences is then thought to represent the broader concept of experience. Firstly, this definition suggests that an experience is an active process (McKnight and Sechrest, 2003:438). Accordingly, this process is perceived to be “unceasing” in the sense that individuals are constantly being exposed to events (McKnight and Sechrest, 2003:433). Consequently, reconstruction of these events may be added to existing constructs of previous and related interpretations (Dale, 1998:174). Secondly, this definition proposes that for an experience to occur, an individual must have the opportunity to reconstruct and interpret events (McKnight and Sechrest, 2003:439). McKnight and Sechrest (2003:438) give the example of a person who has slept during an earthquake. The person does not have the opportunity to reconstruct the events that took place while the earthquake occurred and therefore has not experienced the earthquake (McKnight and Sechrest, 2003:439). Thirdly, an experience, as defined above, requires that individuals recognize events and reconstruct them into a “more comprehensive system” or framework based on events that have occurred (McKnight and Sechrest, 2003:439).

In terms of establishing the relation between what has been experienced and the event exposed to, Weil and McGill (1989:28) provide a simple framework to highlight the linking of previous and present experience through a retrieval process. This retrieval process is termed the “reflection process”. The framework suggests that individuals experience an event and thereafter use a process of reflection to link the current experience with previously held interpretations of the event. Individuals then act or behave in response to the reinterpretation of the event being experienced.

The concept of an “experience” is closely related to the events that people are exposed to (McKnight and Sechrest, 2003:435). However, “experience” in the general sense does not emanate from exposure to a single event (McKnight and Sechrest, 2003:433). The repeated exposure to events allows individuals to reinterpret events that are “construed as relevant to events in the future” (McKnight and Sechrest, 2003:436). Individuals are thought to recognize these repetitive exposures and reconstruct their interpretations to change their behaviour regarding future tasks (McKnight and Sechrest, 2003:433).

Experience may therefore relate to multiple events, which appear to be compounded with existing and related constructs. Individuals seem to recognize the relevance between multiple events or exposures and thereafter change their behaviour for future tasks. The process of reflection facilitates the development of “repertoires of solutions” (Cheetham and Chivers, 1998:267). These stores of solutions are used to reframe difficult problems into more comprehensible situations (Cheetham and Chivers, 1998:267). Ultimately, a reflection process may result in reinterpretation of constructs, thus leading to behavioural modifications and consequently to a potential enhancement in professional competence (Cheetham and Chivers, 1998:267).

The cognitive processes used to reinterpret constructs are associated with short-term memory and long-term memory (Nicholas, 2003: 357). “Short-term memory refers to a set of brief memory stores that holds information in consciousness” (Nicholas, 2003: 357), while memories of facts, images, thoughts, feelings, skills and experiences are thought to reside in long-term memory (Nicholas, 2003: 357). Hence, experiences reside in an individual’s long-term memory. However, an individual’s short-term memory is the initial source of such experiences, as he/she first senses and recognizes the relevance of an event and stores it in short-term memory. If deemed relevant or valuable, the event is then transferred to his/her long-term memory. This reinforces the requirement of relevance proposed by McKnight and Sechrest (2003:436) and ultimately suggests that not all events are seen as relevant. The reflection process is employed by individuals to recover information from long-term memory into short-term memory (Nicholas, 2003:360). Information is thought to be retrieved or

recovered based on its relevance, in order to influence future behaviours and tasks (McKnight and Sechrest, 2003:436). The retrieved information is then thought to be “compared to information previously held” (Dale, 1998:73), to facilitate the reconstruction of constructs. Hence, short-term and long-term memory is related in terms of the information content that is used by each type of memory store.

Long-term memory is of particular importance as it is the repository of experiences, and is ultimately composed of explicit and implicit memory (Nicholas, 2003:362). “Explicit memory” refers to “memory containing knowledge that can be consciously brought to mind” (Nicholas, 2003:362). Explicit memory can be further differentiated into semantic memory and episodic memory. “Semantic memory” represents the “explicit memory of facts”, while “episodic memory” deals with episodes and personal experience (Nicholas, 2003:362).

In contrast to explicit memory, implicit memory cannot be consciously brought to mind (Nicholas, 2003:362). “One of the most important kinds of implicit memory is procedural memory”, which represents the knowledge of skills or procedures (Nicholas, 2003:362). Although procedural memories are not consciously brought to mind, “they are frequently acquired consciously” (Nicholas, 2003:362). For instance, a guitar player must first consciously think about his/her finger movements when learning how to play (Nicholas, 2003:362). Gradually, as the player’s skills improve his/her “conscious efforts become unconscious” (Nicholas, 2003:362). This implies that skills which have been consciously acquired may at some point become procedural memories. In order to form part of one’s procedural memory, implicit memory must therefore at some point reside within explicit memory.

An experience is thought to leave residues of knowledge, skills, outlooks, and manners (McKnight and Sechrest, 2003:445). Knowledge may occur as a result of repeated exposure to an event, which has caused reinterpretation of that event and subsequently produced improved understanding or new knowledge (McKnight and Sechrest, 2003:445). Mumford (1995:16) therefore suggests that “knowledge” may refer to the acquisition of new information or the confirmation of past information.

Refinement of skills may also result from repeated exposure to an event (McKnight and Sechrest, 2003:447). For example, teaching a child to kick a ball may initially require an understanding of the movements required to kick the ball (McKnight and Sechrest, 2003:447). After several repetitions, the child may reinforce his/her ability to kick the ball and therefore improve his/her skills (McKnight and Sechrest, 2003:447).

An individual's outlook or attitude towards a particular event may be altered by exposure to new or related events (McKnight and Sechrest, 2003:448). A change in outlook is often perceived to be associated with a change in behaviour and therefore with the manner in which an individual behaves or responds to the event in question (McKnight and Sechrest, 2003:448). In essence, experience may cause changes in one's behaviour or manner.

These changes are thought to be a result of changes in knowledge, skills or outlooks, which are ultimately brought about by an experience (McKnight and Sechrest, 2003:448). These writers give the example of an earthquake to illustrate this. The initial experience of an earthquake may cause one to panic, yet subsequent earthquakes may not (McKnight and Sechrest, 2003:448). The change in behaviour or manner is attributed to the knowledge, skills and outlooks gained from experiencing the initial earthquake (McKnight and Sechrest, 2003:448).

THE ROLE OF EXPERIENCE IN DEVELOPING COMPETENCIES

Experience may be viewed as “a source and as a way of competence construction” (Paloniemi, 2006:447). This writer has conducted research to “examine employees' conceptions of the meaning of experience in job competence and its development in the workplace” (2006:443). Paloniemi (2006:443) interviewed 43 employees from six Finnish organisations and it was found that 46% of the employees “assessed work experience as the main source of their competence.” The employees interviewed also noted that “work experience alone is not enough” (Paloniemi, 2006:443), and indicated that accumulation and variety of experience is important to development (Paloniemi, 2006:445). Olesen (2001, in Paloniemi, 2006:443) noted that an individual's personal life history is an element in “professional identity construction”. This suggests that although work experience may be essential to competency development, experience gained in areas other than work, including personal experiences, may also serve as a basis for developing social competencies.

In the context of this research study, “experience” is deemed to refer to the collection of experiences that service-oriented managers have accumulated throughout their lives, and not only to the experiences gained as a manager. The rationale behind this is that experience occurs throughout one's life, so to limit experience to that which occurs while employed as a manager would constrain the idea of accumulating experience in alternative contexts such as being a student or a non-managerial employee.

Dale (1998:174) describes the cognitive aspects of competency development through Kolb's Learning Cycle. Kolb's Learning Cycle, which is perceived to be an “accurate representation of how adults learn”, serves as a foundation on which an understanding may be developed

of how experiences are used to develop social competencies (Dale, 1998:174). Kolb's Learning Cycle is an experiential learning cycle which indicates how individuals convert an experience into knowledge. In order to do this, and to recall related experiences, one must grasp and transform experiences (Kolb, Boyatzis and Mainemelis, 2001:228). Once concrete experiences or abstract conceptualizations are grasped, they are reflected upon through a process of consideration to draw new implications based on that which was experienced (Kolb *et al.*, 2001:228).

In terms of the behavioural aspects associated with competency development, Tennant (1997:95) uses the concept of behaviourism to highlight the link between education theory and behaviourism. Skinner (1938, in Tennant, 1997:95) suggests that when behaviour has a rewarding consequence, "it is more likely to occur again". This notion is illustrated in the example of a hungry pigeon that is placed in a sound-proof box with a "prominent button which, if pecked, will result in a food pellet being dispensed" (Tennant, 1997:95). The result of pecking the button and the subsequent dropping of the food pellet will, according to Skinner (1938, in Tennant, 1997:95), cause the pigeon to abandon certain random behaviours and ultimately behave in a manner that reinforces the reward associated with the behaviour of pecking the button. Hence, Tennant (1997:96) emphasizes that the above-mentioned example highlights the link between behaviour and reinforcement.

The above example implies that the knowledge gained from an experience, including the reinterpretation of previously held constructs, may contribute towards changes in individual behaviour. Such behaviour is suggested to be reinforced and therefore repeated if the consequences of the behaviour are viewed as positive. In the context of this research study, positive or rewarding behaviour is seen as managerial behaviour that contributes to the successful development of social competencies. Success in displaying the developed social competencies is suggested to lead to improved employee and consumer satisfaction.

The Conscious Competence Learning Matrix (Thomson and Van Solms, 2006:12) highlights both the cognitive and behavioural aspects associated with competency development. This matrix links the levels of competence with the degrees of consciousness, to demonstrate how individuals develop competencies (Leigh, 2003:17). It suggests that individuals proceed through four stages in developing their competencies or skills (Thomson and Van Solms, 2006:12). Stage one is "Unconscious Incompetence" which refers to a point at which individuals are not aware of skills or the relevance of skills. The individual must "become conscious of his/her incompetence before learning can begin" (Howell, 1982, in Thomson and Van Solms, 2006:12). Stage two of the matrix is "Conscious Incompetence" which refers to the point at which individuals become aware of skills (Thomson and Van Solms, 2006:12).

At this point, the individual still lacks the ability to implement the skills that he/she has become consciously aware of. The individual does, however, recognize the deficiency between the level of his/her own skills and the level of skills required. The individual then acquires more skills or training and proceeds to stage three (Thomson and Van Solms, 2006:14), "Conscious Competence". The individual "will need to concentrate and think to be able to perform the task" (Thomson and Van Solms, 2006:12). The individual will therefore develop mental models to facilitate behaviour that constitutes implementation of the learned or acquired skills and then progress to the fourth stage of the learning matrix, which is the "Unconscious Competent stage", through "practice". The practised skills then enter the individual's "subconscious thinking" and become "second nature" (Thomson and Van Solms, 2006:12).

The Conscious Competence Learning Matrix therefore suggests that the development of competencies requires both cognitive abilities and behavioural consideration. In terms of cognitive abilities, individuals will need to consciously establish an awareness of their skills deficiency. Cognitive abilities are also utilized to create mental models to facilitate performance of skills. In terms of behavioural consideration, individuals will need to practise their acquired skills. Hence, the combination of cognitive abilities and reflective thought is suggested to be critical in competency development. Furthermore, the transfer of competencies to the subconscious, as second-nature competencies, suggests that competency development is related to the repertoire of solutions built by experience.

RESEARCH DESIGN AND METHODOLOGY

A multiple case study research method was employed in this research study (Chell, 2004:47). The Critical Incident Technique (CIT) was used to frame the semi-structured in-depth interviews. The CIT is defined as a "qualitative interview procedure" that "facilitates the investigation of significant occurrences", events or incidents "identified by the respondent" (Chell, 2004:48). Flanagan (1954) originally developed and used the CIT as a quantitative approach (Chell and Pittaway, 1998:24), but since then it has been used in a wide range of disciplines (Gremler, 2004:66), and as a qualitative method. Cope and Watts (2000:104) utilized a qualitative approach to the CIT to explore the impact of critical incidents on entrepreneurial learning. Furthermore, Chell (2004) employed the CIT with a phenomenological approach in a qualitative study of the impact of critical incidents on a business owner's behaviour.

This research study employed a qualitative approach similar to that of Chell (2004) and Cope and Watts (2000). The aim of the CIT, as described in the study conducted by Chell

(2004:47), was to “gain an understanding of the incident from the perspective of the individual, taking into account cognitive, affective and behavioural elements” (Chell, 2004:48). Chell (2004:47) suggests that the CIT be used through largely unstructured interviews “to capture the thought processes, frame of reference and the feelings about an incident or set of incidents, which have meaning for the respondent”.

Cope and Watts (2000:104) previously employed the CIT by interviewing six respondents to explore “the learning process of entrepreneurs in relation to the parallel processes of personal and business development” and indicated that the respondents provided “a diverse range of experiences and knowledge”. Given the premise that the CIT offers a “rich source of information” (Chell, 2004:56), it was decided, in planning this study, that interviewing six participants in-depth should generate sufficient data.

Data were analysed using the open coding procedures of grounded theory (Chell, 2004:49). “Open coding” is the “process of breaking down, examining, comparing, conceptualizing, and categorizing data” (Strauss and Corbin, 1990: 61). In other words, open coding represents the portion of data analysis “that pertains specifically to the naming and categorizing of phenomena through close examination of the data” (Strauss and Corbin, 1990:62).

FINDINGS AND DISCUSSION

Social Competencies Identified

The participants in the study, in this case bar managers, displayed four categories of social competencies to deal effectively with the identified critical incidents and thereby fulfil their managerial duties, namely, emotionally laden social competencies, power-based social competencies, dispute-handling social competencies and information-handling social competencies.

Firstly, emotionally laden social competencies involved responses in which the participants related to others on an emotional level. This included showing concern and understanding, motivating others, and forming or strengthening relational partnerships. The participants utilized these competencies to address critical incidents relating to problematic employee behaviour, problematic consumer behaviour, service complaints by consumers, and work and personal problems faced by employees. Secondly, the power-based social competencies entailed the participants’ interaction with others based on their positions of authority. This included asserting authority and issuing commands. The managers used their power-based social competencies to handle critical incidents concerning problematic

employee behaviour, problematic consumer behaviour and service complaints by consumers. Dispute-handling social competencies were implemented to deal with critical incidents relating to problematic employee behaviour and problematic consumer behaviour. These competencies involved the participants' interaction with others to resolve disputes. Lastly, they employed their information-handling social competencies to address critical incidents pertaining to problematic employee behaviour, problematic consumer behaviour, service complaints by consumers, and problems that employees faced. The information-handling social competencies involved the participants' interaction with others to get or give information.

Experiences that Contributed Towards the Development of the Identified Social Competencies

The experiences recollected by the participants were either single specific experiences or multiple compounded experiences. Through the recollection of events that were considered single specific experiences, they implied that solitary events contributed to the development of social competencies. These solitary experiences related to events that they viewed as influential and therefore critical in their lives. This suggests that significant or influential solitary events may represent a learning source in the development of social competencies.

The recollection of multiple compounded experiences seems to strengthen the conclusion offered by McKnight and Sechrest (2003:435) that repetitive exposures are required for the reinterpretation of constructs. Furthermore, the fact that experiences were compounded over time suggests that repeated exposure to an event may contribute to behavioural modifications, which, as noted by Civelli (1998:51), is a requirement for the development of competencies.

Authoritative experiences, drunken dilemma experiences and supportive experiences were highlighted by the participants as the experiences that contributed towards the development of their social competencies.

The participants recalled experiences that occurred in a variety of contexts, including home, school, university, work and "watering hole" contexts. This implies that social competencies may be developed through experiences that include more than work experiences, and ultimately suggests that experiences related to a broad range of contexts contribute to the development of social competencies.

The experiences that the managers recollected were based on either their own past responses or the responses of other people whom they had observed. The fact that

experiences based on the responses of other individuals were noted as contributing factors in the development of social competencies, suggests that previous interaction with other individuals may represent a key element in the development of social competencies. Given the nature of social competencies in social situations, it is not surprising that the participants' previous social interactions with other individuals represented a source of learning.

The findings of this research study also imply that formal learning methods may be used to develop social competencies. One manager highlighted a formal camera-training course in the development of his social competencies, which suggests that formal learning methods may contribute to the development of social competencies. This contradicts Professor Morris's Continuum of Learning, which proposes that only concrete knowledge may be learned in a formal manner, whereas social and interpersonal skills are learned through experience (Barnett *et al.*, 1985:4).

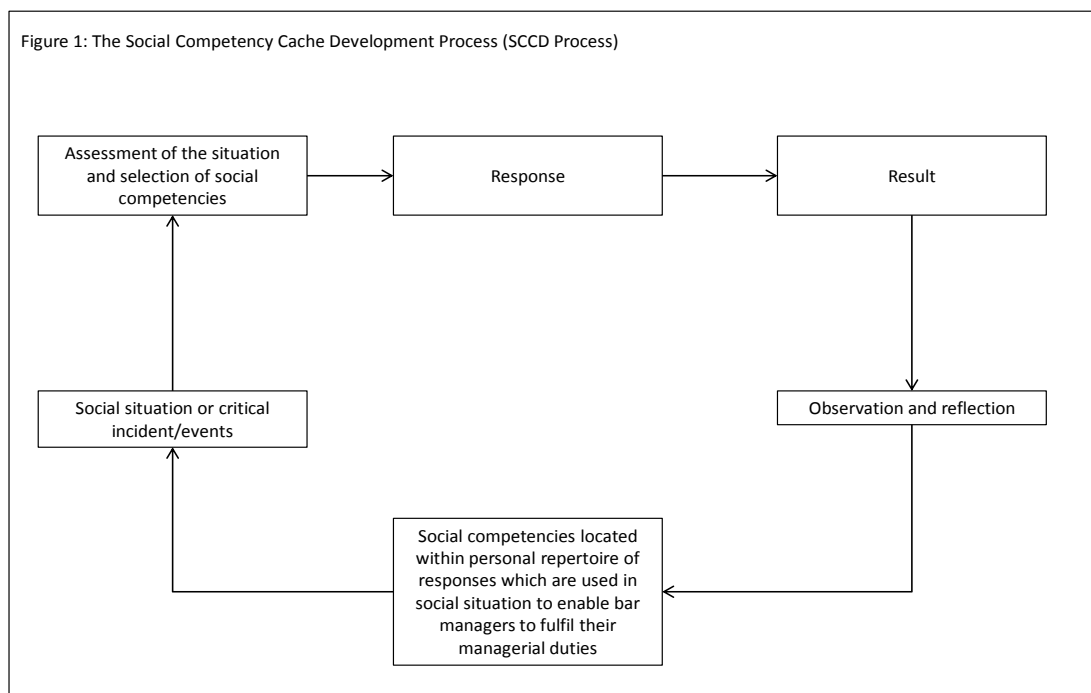
PRACTICAL IMPLICATIONS

One may conclude that social competencies may be developed by means of a mechanism that facilitates the conscious identification and leveraging of experiences offers a means to develop social competencies. It is proposed that the SCCD Process be used to assist in such development of service-oriented managers' social competencies.

The SCCD Process is a continuous process which illustrates the manner in which these participants utilized their social competencies and the manner in which experiences contributed towards the development of such social competencies. As Figure 1 indicates, the SCCD Process centres on the social competencies located within the cache or reserve of responses referred to as the "Personal Repertoire of Responses". The social competencies named represent responses to social situations. The Personal Repertoire of Responses, which is the storage point for social competencies, represents an accumulation of compounded and reinterpreted responses. Within the context of this research study, the personal repertoire of responses indicates an accumulation of effective responses which the participants had developed through experiences. Personal Repertoire of Responses therefore represents the pool of social competencies and experiences that the participants drew on when addressing social situations. This repertoire of responses was then used in social situations to assist the participants in fulfilling their managerial duties that were associated with ensuring employee and consumer satisfaction.

As illustrated below in Figure 1, the SCCD Process encompasses several phases, including:

- The Situation phase
- An Assessment and Selection phase
- The Response phase
- The Results phase
- The Observation and Reflection phase



(Researcher's own construction)

The Situation phase of the SCCD Process refers to the critical incident or event that warrants a response. This relates to the social situation in which the bar participants could find themselves or, in terms of experience, to the event that the participants could be exposed to. They would then assess the situation and select an appropriate response from the social competencies located in their personal repertoire of responses. The selected response is then physically implemented in the Response phase. The Results phase indicates the outcomes of implementing the selected responses and social competencies. The Observation and Reflection phase is then executed to facilitate reinterpretation of previous responses and social competencies, by which the participants compared the outcomes of implementing the social competencies with the effectiveness of previous responses. These reinterpretations are then integrated with existing social competencies and compounded into the personal repertoire of responses. The process is continual in that

the compounded personal repertoire of responses is used to address subsequent social situations and is continually shaped by the outcomes of implementing the reinterpreted responses and social competencies.

CONCLUSION AND RECOMMENDATIONS

In this study, the SCCD Process suggested that experience contributed to the development of the participants' social competencies by developing their personal repertoire of responses. Experience developed the personal repertoire of responses through a reflection process, the residues of experience and the familiarity of situations and results. Experience assisted the participants in developing their social competencies by promoting the addition of new social competencies or the reinterpretation and modification of existing social competencies. In conclusion, the SCCD Process is recommended as a new avenue to leverage and thereby develop social competencies.

The SCCD Process is recommended to service-oriented organisations as a training tool that leverages the unique experiences of managers. Hence, the true value of the SCCD Process lies in the individual's experiences and the conscious effort to process the link of relevance between past and current events. It contributes to the training body of knowledge and queries the assumption that an individual learns only because he/she has experienced an event. Essentially, the SCCD Process requires conscious and intentional effort to recognise the relevance of experiences and link them to current situations to facilitate an optimal response.

Additionally, the SCCD Process adds the element of consciously leveraging experiences to develop social competencies. In other words, it forces individuals to consciously evaluate the potential of past experiences. Given the importance of emotional intelligence, the development of social competencies has the potential to provide service-oriented organisations with valuable advantages over competitors.

Further research should explore the contextual and sub-conscious triggers which may prompt individuals to make the link between their past experiences and exposure to current events.

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**SENSE OF COHERENCE AND ORGANISATIONAL COMMITMENT: A CASE STUDY IN
A SELECTED SOUTH AFRICAN PARASTATAL**

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ABSTRACT

Globalisation, constant adaptation to new situations and increasing challenges in the contemporary business environment has impacted on the well-being of employees and their organisational commitment. The contribution of this paper is to increase the understanding of sense of coherence (SOC) and organisational commitment (OC) and their interrelationship in the selected South African parastatal context.

Research findings indicate that managers viewed their individual responsibility and their inter-personal relationships as being main indicators for keeping healthy. With regard to SOC, manageability and comprehensibility were more important to managers than meaningfulness, and significant differences were found between the average African and Indian meaningfulness scales scores. In terms of OC, affective commitment was the predominant organisational culture in the organisation. With reference to the relationship between SOC and OC, there was a significant negative linear relationship between continuance organisational commitment and a sense of manageability and meaningfulness. Recommendation for managing future challenges in the selected organisation is provided.

INTRODUCTION

Globalisation, rapid change, growing complexities and constant adaptation to new situations as well as increasing challenges to integrate opportunities in the contemporary business environment have impacted on the lifestyle and well-being of employees.

In the South African organisational context, managers have to cope with management challenges due to globalisation and post-apartheid influences. Webster and Adler (1999) describe this phenomenon as a "double transition". This double transition also affects socio-political and cultural aspects in management within organisations, and is associated with self-managed career development, growing competition, political restructuring processes and technical advancement. However, the issue of health and well-being is also of great importance in the South African management context (Pillay, 2008).

It is important that management provide a platform for coping with these and other challenges and stressors in the work environment. Antonovsky (1979, 1987) recognised the fact that individuals can remain healthy despite the presence of overwhelming stressors. He developed the concept of salutogenesis, the science of the question "What keeps one healthy?" This concept includes the SOC, which is a life-orientation that is believed to be entrenched in an individual's historical and present socio-cultural experiences. Sense of Coherence develops over time, provided that General Resistance Resources (GRR) is

repeated, consistent and regular (Rothman, Jackson & Kruger, 2003). In contrast, experiences which are unpredictable, uncontrollable and uncertain lead to a weak SOC (Rothman *et al.* 2003) and are associated with patterns of declining health (Morrison & Clift, 2006).

How organisations are managed plays an important role in influencing how an employee develops SOC and thereby increases chances of keeping healthy (e.g. Feldt, Kinimaki, Rantala & Tolvanen, 2004). Du Buisson-Narsai (2005) emphasises that significant relationships exist between SOC and OC. In these terms, OC of managers and employees is of special interest with regard to SOC. In this paper, OC (Kreitner & Kinicki, 2001: 227) refers to the extent to which individuals identify with their organisation, and the extent to which they are committed to its goals.

As only a few studies focusing on SOC and OC within the South African management context (Pillay, 2008; Strümpfer & Wissing, 1999; Du Buisson-Narsai, 2005; McKenna, 2005) have been carried out, the importance of this exploratory research comes to the fore. The purpose of this study is to examine the relationship between SOC and OC in a selected parastatal in South Africa, and thereby contribute towards an increased understanding of these complexities in management and health sciences.

In the following section, the problem being investigated as well as the research objectives and the contribution of this paper will be presented. Thereafter, the theoretical background of SOC, salutogenesis and OC, the research design and methodology, as well as the research findings, will be discussed. Finally, conclusions and recommendations will be provided.

PROBLEM INVESTIGATION AND RESEARCH OBJECTIVES

The contribution of this paper will be to increase the understanding of SOC and OC in a South African organisational context. In this study the way managers define and experience SOC and OC will be explored. Furthermore, the correlation between SOC and OC will be examined.

The primary objective of this paper is to understand managerial SOC and OC and their interlinkages from both a qualitative and quantitative perspective. It is assumed that these research findings will be influenced by variables of gender, age and cultural group. To achieve this aim, the secondary objectives of this study are to:

- determine the profiles of SOC and OC within the selected organisation;

- determine the relationship of selected biographical variables such as gender, age and cultural group with SOC and OC;
- determine the relationship between SOC and OC; and
- make necessary recommendations regarding the research findings.

To achieve these primary research objectives, the following research questions will be explored:

- How do managers at the selected organisation define the concepts of health and strategies of keeping healthy?
- What is the SOC profile of managers at the selected organisation?
- Is there a relationship between selected biographical variables such as gender, age and cultural group and SOC?
- How do managers at the selected organisation define OC?
- What is the OC profile of managers at the selected organisation?
- Is there a relationship between selected biographical variables such as gender, age and cultural group and OC?
- What is the relationship between SOC, concepts of health and OC at the selected organisation?

These questions will provide the basis on which the research findings will be presented, leading to the conclusions and recommendations.

SENSE OF COHERENCE AND SALUTOGENESIS

In medical sciences in earlier years the bio-medical model was mainly acknowledged, and health was defined as an absence of disease. Only towards the end of the past century has a change in the health sciences led to the concept of positive health (Hurrelmann & Laser, 1993). The salutogenic model essentially emphasised the limitations of the pathogenic health perspective in understanding illness and diseases (Antonovsky, 1979, 1993) and developed a perspective that focused on resources that facilitate successful coping and health promotion.

The World Health Organisation (WHO 1946) defined 'health' more comprehensively, as "physical, mental and social well-being, not merely the absence of disease or infirmity". Health has become a social category, which is defined through the difference of body and psyche (Faltermaier, 1994) and depends on one's perception and one's existing means of dealing with stress. Thus, health has become a physical, but also a socio-cultural

phenomenon of individual constructs. It is identical with "the subjective well-being and the health-oriented behaviour of a person" (Bengel, Strittmatter & Willmann, 1999:15).

How people feel, how they behave and cope with stress, and how they keep healthy, are largely determined by their general attitude toward the world and their own life (Blättner, 2007). Antonovsky (1979) refers to this attitude as "life orientation" the Sense of Commitment and describes it as follows (1987):

The sense of coherence is a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that: (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges worthy of investment and engagement.

The SOC consists of the following three main components: comprehensibility, manageability and meaningfulness (Antonovsky, 1979).

The sense of comprehensibility

This component describes the expectation or the ability of a person to process familiar and unfamiliar stimuli as ordered, consistent, structured information, and not as chaotic, random, accidental and inexplicable. The findings regarding this comprehensibility component derive from experiences of consistency that support the classification, categorisation and structuring of information.

The sense of manageability

A person with "the sense of manageability" is convinced that difficulties can be solved. The sense of manageability consists of confidence and "the extent to which one perceives that resources are at one's disposal, which is adequate to meet the demands posed by the stimuli that bombard one" (Antonovsky, 1987:17). This SOC component develops through the experience of one's own resources and the belief that strains can be kept in balance and managed. It however also depends on the assumption that other people or a higher power will help to overcome difficulties.

The sense of meaningfulness

This component describes "the extent to which one feels that life makes sense emotionally, that at least some of the problems and demands posed by living are worth investing energy in, are worthy of commitment and engagement, are challenges that are 'welcome' rather

than burdens that one would much rather do without" (Antonovsky, 1987:18). Meaningfulness is fostered by the feeling of having influence on the shaping of situations. It is considered to be the most important component, because without meaningfulness, life is experienced as a burden (Bengel *et al.* 1999).

A developed SOC tends to have an impact on individuals (Strümpfer, 1990), such as experiencing the workplace as stimulating, clear, ordered, structured, consistent and predictable and as a challenge they can cope with. A strong SOC is directly related to keeping healthy despite stress, and to maintaining personal balance (Geyer, 1997).

ORGANISATIONAL COMMITMENT

Organisational commitment (OC) is defined as the relative strength of an individual's identification with involvement in a particular organisation (Allen & Meyer, 1997). Mowday Steers and Porter's (1979) seminal definition of OC deals with three factors: (a) a strong belief in and acceptance of the organisation's goals and values, (b) a willingness to exert considerable effort on behalf of the organisation, and (c) a strong desire to maintain membership in the organisation. Committed employees can form part of an organisation's competitive advantage: they remain with the organisation through "thick and thin"; attend work regularly; work for a full day (and perhaps more); protect organisational assets; and share common goals (Allen & Meyer, 1997). Hence, a committed workforce is an added advantage to an organisation.

It has been asserted by Lok and Crawford (2004:594) that the success of an organisation is dependent on the level of involvement and commitment of employees. Even though there are different typologies of organisational commitment such as those described by Becker (1960), Kanter (1968), Mowday *et al.* (1979) and Allen and Meyer (1997), for the purpose of this study, the typology of Allen and Meyer (1997) will be used as it is a reliable and valid research instrument that has been widely applied. According to Allen and Meyer (1997), there are three OC profiles, namely affective, normative and continuance. Although each commitment profile represents a relationship between organisation and employee, the natures of the relationships are different. An employee who has a strong *affective commitment* will stay because he/she wants to do so (relationship between the employees and their co-workers and supervisor); employees with strong *continuance commitment* feel they have to stay, (the individual's association with the organisation is based on assessment of economic benefits gained (Beck & Wilson, 2000:465); and those with strong *normative commitment* feel obligated to stay (to repay the benefits from the organisation by remaining as part of the workforce) (Allen and Meyer 1997:9).

In the following section, research studies on SOC and OC will be presented.

SENSE OF COHERENCE AND ORGANISATIONAL COMMITMENT

Former studies on SOC and OC (e.g. Strümpfer and Wissing, (1999); Du Buisson-Narsai, (2005); McKenna, (2005); and Pillay (2008:98) found that "comprehensibility reflects a practical, significant, negative correlation of medium effect with continuance commitment." This means that individuals who perceive the world as ordered, consistent, organised and structured are able to make cognitive sense of their environment, and identify less with the costs associated with leaving the organisation. Other significant relationships with regard to affective and normative commitment could not be found between SOC and OC (Pillay 2008).

The research by Du Buisson-Narsai (2005:79) confirmed that OC is a multifaceted concept, and that its components display some significant relationships with the sense of coherence. The research revealed that there is a negative relationship between continuance OC, normative commitment and SOC (Du Buisson-Narsai, 2005:80). The negative correlation between continuance commitment and SOC constructs indicates that individuals, who display an enduring feeling of confidence in the internal and external environment being predictable, manageable and meaningful, will not stay with the organisation merely for cost reasons (Du Buisson-Narsai, 2005:69). Based on this, Du Buisson-Narsai (2005:69-78) concluded that employees whose primary link to the organisation is based on continuance commitment remain with it because they need to do so, whereas employees with a high level of normative commitment (a feeling of obligation to continue employment) feel that they ought to remain with the organisation (Du Buisson-Narsai, 2005:78).

RESEARCH DESIGN AND METHODOLOGY

According to the phenomenological hermeneutic paradigm, descriptive data are gathered (Gummesson, 2000) by using an abductive approach, which has become increasingly popular in management sciences and has been used to synthesise qualitative and quantitative methods in health sciences (Flick & Schäffer, 2010; Pope, Mays & Popay, 2007). This approach is appropriate for response to the research questions by creating knowledge based on data gathered from interviews as well as the completed questionnaires, in order to construct "thick data" (Geertz, 1973). In this study a single case study approach is used (Yin, 2009) by integrating triangulation of data and methods (Collis & Hussey, 2003: 78).

Research setting and sample

The research population included all the managers at the selected parastatal, amounting at the time to a total of 31 managers. In terms of the qualitative data gathering, 17 selected interviewees participated in the focused interview sessions. These interviewees participated voluntarily in the interviews after having been approached for participation in this research by the Human Resources Department at the selected organisation. With regard to the quantitative data; a total of 29 respondents completed the research instruments with regard to SOC and OC from a population of 31 respondents. Use was made of the research instruments (quantitative data) to support the qualitative data. As mentioned previously, triangulating of data gathering and data analysis was used in this research. The quantitative aspect of this research is therefore viewed as exploratory in nature, owing to the small number of respondents.

Data collection

Qualitative data were collected by means of focused interviews which took place at the organisation's headquarters. Interviews focused on the topic of health and SOC, as a life orientation, and various aspects of OC. As described in the theories, a strong SOC is directly related to keeping healthy despite stress, and maintaining personal balance (Geyer, 1997). This interlinkage was to be established by using quantitative and qualitative research data.

Observations were also made in field notes, which contributed to analysing and interpreting the qualitative data with regard to SOC and OC aspects within the selected organisational context.

The quantitative data was collected by means of two self-administered questionnaires, namely, Sense of Coherence – Antonovsky (1997) Life Orientation Questionnaire (LOQ) – and the Organisational Commitment Survey (OCS) by Allen and Meyer (1997). The self-administered questionnaires were administered during the course of a two-day strategic session held by the selected organisation. The completed questionnaires were voluntarily completed during these two days and inserted into a sealed box.

The Antonovsky SOC Questionnaire (SOCQ), developed by Antonovsky (1997) reflects different aspects of life, and analyses life-orientations in individuals, including the dimensions of manageability, comprehensibility and meaningfulness. These life-orientations are associated with aspects of well-being and health, and provide an indication of an individual's SOC. The questionnaire consisted of 29 seven-point Likert-type questions.

The Organisational Commitment Survey (OCS) developed by Allen and Meyer (1997) focuses on three dimensions of organisational commitment, namely affective, continuance and normative commitment, and it can be applied across domains. The questionnaire consists of 21 five-point Likert-type statements.

Data analysis

Qualitative data analysis

The five steps model of content analysis was used with regard to analysing the *qualitative data* (Terre Blanche, Durrheim & Kelly, 2008). These steps are:

- Step 1: Familiarisation and immersion
- Step 2: Inducing themes
- Step 3: Coding
- Step 4: Elaboration
- Step 5: Interpretation and checking.

The content analysis comprised a subjective process between the text and the person categorising and coding the text. According to Yin (2002: 45), "Verifying the reliability of content analysis is primarily done by inter-individual and intra-individual verification" as in this study. In this study, re-categorisation and coding of the text are considered by inter-individual verification – using a second researcher to verifying the created categories and codes – and intra-individual verification – checking and re-checking categories and codes through the researcher. The 5-step model is situated in between the "quasi-statistical styles" – which use predetermined categories and codes to yield quantifiable indices - and the "immersion/crystallisation styles" which create the categories and codes inductively (Terre Blanche *et al.* 2008: 322). The immersion/crystallisation styles involve "becoming thoroughly familiar with the phenomenon, carefully reflecting on it, and then writing and relying on one's intuitive grasp of what is going on rather than on any particular analytic techniques."

Quantitative data analysis

All the items in the measuring instrument were subjected to a Cronbach's alpha coefficients analysis for reliability. "Reliability" refers to the degree of accuracy or consistency that an indicator measures, and assesses the degree to which an indicator will yield the same results on repeated application. To be reliable, measurement must be consistent between each individual surveyed across settings and at different times (Collis & Hussey, 2003:58). Reliability is important as it indicates whether or not an instrument's measures are free from

error, therefore yielding consistent results (Collis & Hussey, 2003:58). However, because of the small number of respondents in this exploratory study, it was not possible to assess the validity of the research instruments. "Validity" is the extent to which the survey information is relevant to the conclusion being drawn, and is sufficiently accurate and complete to support the conclusion. A brief review of previous research pertaining to the reliability and validity of the two measuring instruments used in this study will be given, after which an overview of the data analysis will be given.

Sense of Coherence Questionnaire (SOCQ)

Antonovsky (1997) indicates that the SOC scale yields internal reliability indices of between 0, 78 and 0, 93, as reported in 26 different studies, and test-retest reliability indices of between 0, 56 and 0, 96. He (Antonovsky, 1993) reports a consistently high correlation coefficient ranging between 0, 83 and 0, 93, indicating an internal consistency and reliability of the SOC-Questionnaire. Others confirm internal consistency at 0, 80 (Jackson & Rothmann, 2001) as well as a high level of internal consistency (Baloyi, 2000) and a high test-retest reliability of 0, 90 (Cilliers & Kossuth, 2004). Lustig and Strauser (2002) note that the alpha coefficient of the questionnaire was 0, 91 in their research. Test-retest reliability has also been satisfactory with reports of 0.93 at a 30-day interval (Frenz, Carey & Jorgensen, 1993).

Antonovsky (1993) reports construct validity varying between 0, 38 and 0, 72. Antonovsky (1993) and later Vahtera and Nurmi (2000) confirm that the instrument possesses construct, content, face, consensual, predictive and criterion validity. According to Eriksson and Lindström (2003), the validity of the SOC scale seems to be acceptable. The SOC questionnaire has been used in at least 33 languages in 32 countries all over the world, comprising both Western countries and countries such as Thailand, China, Japan, and South Africa. It seems to be a cross-culturally applicable instrument. The consensual validity of the SOC scale seems to be moderate. Wissing and van Eeden (1997:31) have also shown that the SOC construct "proved to have highly acceptable levels of convergent and discriminant validity," and they comment that SOC seems to be a "universally applicable and valid construct across cultural, gender and age differences as hypothesized by Antonovsky."

Organisational Commitment Questionnaire (OCQ)

Allen and Meyer's (1990) research instrument (OCQ), used in this study, has been previously tested for reliability in a variety of cultural contexts, in industries and in international studies (Clugston, Howell & Dorfman, 2000; Lee, Allen, Meyer & Rhee, 2001; Meyer & Allen, 1991; Rashid, Sambasivan & Johari, 2003; Wasti, 2003). As can be seen

from Table 1, good reliability values (Cronbach alpha coefficients) for each dimension have been found.

Table 1: The reliability of the Allen and Meyer (1997) questionnaire

Commitment Dimension	Allen & Meyer (1990)	Clugston <i>et al.</i> (2000)	Lee <i>et al.</i> (2001)	Rashid <i>et al.</i> (2003)
Affective	0.87	0.85	0.86	0.92
Continuance	0.75	0.88	0.61	0.93
Normative	0.79	0.80	0.74	0.72

With regard to the validity of the questionnaire, Allen and Meyer (1990: 6) subjected the 21 items comprising the three organisational commitment scales to a factor analysis. Clugston *et al.* (2000: 13) found that there was validity in the Allen and Meyer measuring instrument. Wasti (2003: 307) also performed a factor analysis with regard to the questionnaire in a Turkish context that yielded a three-factor solution, which is comparable to the Allen and Meyer model, and therefore also suggests validity in the instrument. This instrument has been shown to have validity across various cultural contexts.

The instrument has also been successfully tested for reliability and validity in the South African context by Manetje (2005), Louw and Boshoff (2006), Nyengane (2007), Van Stuyvesant-Meijen (2007) and Pittorini (2008). From the previous discussion it is evident that Allen and Meyer's (1990) measuring instrument is both reliable and valid.

Quantitative data statistical analysis

Descriptive statistics relating to SOC and OC, such as the mean, standard deviation and frequency distributions, were calculated to summarise the sample data distribution. To determine whether there were significant differences in the average scores for the SOC dimensions (manageability, comprehensibility and meaningfulness) an Analysis of Variance (ANOVA) was conducted. In addition, the Tukey's HSD test was used to reveal whether there were significant differences between the average scores for manageability, comprehensibility and meaningfulness. In order to determine the differences between SOC and selected biographical variables such as gender, age and cultural group, ANOVAs and Levene's test was used. Separate T-tests were conducted on each SOC scale, using pooled estimates for biographical variable variances.

The same analyses were done for organisational commitment. In order to assess the relationship between SOC and OC, Cohen's *d* statistics were calculated to establish the Pearson's correlation coefficient.

Research ethics

Permission to undertake this research was obtained from the Board, and the Director of Corporate Services and Executive Management of the selected South African parastatal. The content and process of the research were agreed upon between the researcher and the Director of Corporate Services. The research participants agreed to participate voluntarily in both the interviews and in completing the self-administered questionnaires. To ensure anonymity, the respondents were requested to insert their responses into a sealed box. Confidentiality was guaranteed by the researcher, and maintained throughout the research process and upon the publication of research findings. The names and positions of the managers were therefore not linked with the content of the data, to ensure anonymity and confidentiality.

Limitations and strength of this study

The strength of this study lies in the abductive approach to SOC and OC. However, its limitation is that it is a single case study, focusing on one selected organisation with a limited number of respondents, and should therefore be viewed as exploratory in nature. Even though findings are not generalisable to the context of other South African parastatals, they provide recommendations with regard to the improvement of managerial SOC and OC which might also be transferred to other organisational settings in South Africa.

RESEARCH FINDINGS

Qualitative and Quantitative Findings

A total of 31 managers were requested to complete two self-administered questionnaires, with a response rate varying from 80% to 90% between the two research instruments.

Biographical information

From the biographical information it was evident that the most prevalent age group was between the ages of 40-49 (36.67%) while the majority of the respondents were male (76.67%). Middle management comprised 43.33% of the sample, while lower management consisted of 40% and top management 13.33%. Seventy-six percent of the respondents were religious and 70% were married.

Reliability of research findings

Cronbach's alpha coefficients of less than 0.50 are deemed to be unacceptable, those between 0.50 and 0.60 are regarded as sufficient, and those above 0.70 as acceptable (Nunally, 1978). According to Sekaran (1992), Cronbach alpha coefficients greater than 0.80 can be regarded as good. The Cronbach alpha coefficients for the Antonovsky life orientation were as follows: Comprehensibility: 0.683746 (Sufficient); Manageability: 0.734022 (Acceptable); Meaningfulness: 0.811761 (Good). On the other hand, the Cronbach alpha coefficients for OC were: Affective Commitment: 0.055882 (Sufficient); Continuance Commitment: 0.523067 (Sufficient) Normative Commitment: 0.333702 (Unacceptable). All of the Cronbach's alpha values, except for normative commitment, were between 0.52 and 0.81, indicating that the internal reliability of the scores derived from the measurement instrument used in this study can be regarded as ranging between acceptable and good. As previously stated, both these instruments have been well tested across different contexts. The lower Cronbach's values could be attributed to the small number of respondents, thus emphasising the exploratory nature of this research.

The research findings pertaining to health concepts and the Sense of Coherence (SOC), organisational commitment (OC); and the relationship between SOC and OC are discussed in detail in Annexure A. The research findings are summaries in the next section on "Discussion".

DISCUSSION

In the following section the research findings will be discussed in relation to the literature review.

Health and Sense of Coherence (SOC)

With regard to the qualitative data, managers in this organisation had broad and various ways of defining health, including physical, emotional, mental, psychological and spiritual aspects of life. Health to them was more than "being free of pain and sickness"; they had integrated the "positive health" concept (Breslau, 1972). At the same time, managers were resource-oriented (Antonovsky, 1979). Managers were highly aware of the fact that health is connected to an approach of "overall well-being". It was interlinked with the identity of the person and a balanced life with high life quality.

Feeling healthy was interlinked with energy, relaxation, a positive attitude and positive emotions, such as happiness. It was also connected to "being at peace". The opposite of "feeling healthy" was defined as "feeling stressed" and "being sick". Managers were highly aware of the concept of "feeling healthy" and could easily define what their concept of "feeling healthy" was.

The findings indicate that particularly "doing sports" and a "healthy nutrition" were connected to managerial attitudes of *"keeping health"* by a majority of the managers. Keeping healthy was very much connected to positive family relationships and people with a positive attitude. Also individual mechanisms were viewed as supporting the health of managers, such as mediation and reflection, as well as competencies of "managing stress". Managers therefore particularly mentioned individual activities as supportive of their health, as well as their inter-personal relationships. They did not mention any connection or impact of the work environment on their keeping healthy. This shows that the managers saw their individual responsibility as well as their inter-personal relationships as being main indicators for keeping healthy.

Managers' narratives in the interviews were complex, structured, and consistent and clear (comprehensibility); they perceived their experiences at work as manageable and were able to activate personal resources (manageability). They were motivated; felt that their work demands were welcome challenges into which they enjoyed investing their energy (meaningfulness). These findings lead to the conclusion that managers generally had a high SOC according to the qualitative data.

With regard to SOC, the quantitative findings showed that manageability and comprehensibility were more important to managers than meaningfulness. There were significant differences in the average scores for manageability, comprehensibility and meaningfulness. However, there is insufficient evidence that the average SOC scores were significantly different according to gender variances and age groups. In addition, there were no significant differences in the average scores of the comprehensibility and manageability scales between the various cultural groups, except for meaningfulness. In particular, there were significant differences between the average African and Indian meaningfulness scales scores. Scoring the highest in manageability implies that the respondents liked the challenge of coping with the challenges of being managers. There was a sense amongst the managers that difficult situations could be resolved.

The qualitative and quantitative findings complemented each other to show that managers were highly aware and reflective of their health. They showed that they understood the concepts of health and well-being (comprehensibility) and felt that they could contribute to feeling healthy by becoming active (manageability). They felt that they were, to a certain degree, in control of their health and that they could activate the resources they needed to contribute to their health actively (meaningfulness).

Although spirituality played a role to a certain degree, it was not as important as the comprehensibility and manageability aspects in the life of most of the interviewees. Only for Indian and Black managers was meaningfulness more relevant than for White managers, shown in qualitative and quantitative findings.

Organisational commitment (OC)

In terms of the qualitative data regarding OC, findings show that managers were generally committed to the organisation, mainly with regard to their colleagues and their personal relationships. Managers viewed the collegial treatment as positive and particularly respectful and tolerant. They identified with their colleagues and the organisation in terms of affective commitment (Meyer and Allen, 1997) as shown in their narrations. Managers saw organisational commitment as multifaceted, as described in the literature (Du Buisson-Narsai, 2005:79).

The quantitative findings indicate that managers in the organisation had a largely affective commitment profile. The positives of having such a commitment profile have been illustrated by a number of authors such as Allen and Meyer (1997). There were significant differences between the average scores of the organisational commitment scales. In particular, there was a significant difference between Affective commitment and Continuance commitment. No significant differences between the average gender, age or cultural group scores were found for any of the organisational commitment scales.

The relationship between SOC and OC

The qualitative data indicated that most of the managers had a positive health concept which was linked to a positive relationship with colleagues. During the interviews it was evident that managers with African and Indian cultural background highlighted their values, beliefs and religion. Strong values, beliefs and religion are associated with a strong meaningfulness in life orientation.

In response to the research question "What is the relationship between SOC and OC at the selected organisation?", it was found that there were no statistically significant relationships between affective and normative commitment and a sense of comprehensibility, manageability, and meaningfulness. However, it was found that there was a statistically significant negative linear relationship between continuance organisational commitment and sense of manageability and meaningfulness. This finding implies that if individuals felt that they could not manage and cope with work challenges on a daily basis, they felt stressed (low manageability). This implies that managers would probably work at the organisation mainly for economic reasons (continuance commitment). These high stress levels need to be balanced. At the same time it can be concluded that managers with a high meaningfulness would preferably have an orientation towards affective commitment rather than continuance commitment, because materialism would be less important to them. Meaningfulness in life would be more important to them. Individuals with a high sense of manageability and meaningfulness would not work for an organisation primarily for economic reasons. This finding is also supported by former research (Du Buisson-Narsai, 2005:69). During the interviews, it was repeatedly highlighted that the managers enjoyed working in the organisation because of the meaningful work they did.

RECOMMENDATIONS

Regarding SOC and OC, the following recommendations can be made to the organisation.

Although there was a high level of SOC in managers in the organisation and health was considered as being prevalent, it is recommended that:

- workshops and training with regard to managerial health and well-being in terms of personal development be considered. Such workshops would be valuable in assisting managers to cope with stress at work and developing a resource-oriented perspective in daily work routine from a salutogenetic perspective;
- a "sick" and "fitness" room/area be considered; and
- individual managerial coaching processes could support the development of SOC and OC and thereby contribute to developing the organisational health culture.

Considering that manageability and comprehensibility were more important to managers than meaningfulness, it is recommended that in terms of manageability management, the organisation maintain the culture of assisting managers and subordinates to overcome difficulties since there was a strong sense of being able to do so. Secondly, in terms of comprehensibility, there was a strong preference amongst management that information

should be processed in a structured and ordered manner. This logical approach to managing future challenges should be maintained.

The issue of organisational commitment was of particular significance to managers, as with the increasing speed and scale of change there has been a greater need to ensure employees' commitment. The selected organisation has a positive organisational commitment profile, 61% of employees having an affective commitment or emotional attachment to the organisation (they stay because they want to stay). As an organisation, one should strive to achieve a workforce with a high level of affective commitment. Greenberg and Baron (2003:162) assert that employees' attachment to, and thus desire to work for, an organisation, could be due to employees agreeing with the organisation's underlying goals and values.

- It is thus recommended that to increase its level of affective commitment or maintain it, management at the selected organisation could focus on creating or continuing to develop programmes that will align the goals and values of the organisation with the goals and values of employees.
- In nine studies involving 2,734 persons, Dunham, Grube, and Castaneda (1994:375) examined how participatory management and supervisory feedback influenced employee levels of affective, continuance, and normative commitment. The researchers found that when supervisors provided feedback about performance and allowed employees to participate in decision-making, employee levels of affective commitment were stronger than both continuance and normative. Thus managers at the selected organisation should create an environment that encourages participation and feedback.

Concluding, focusing on SOC and OC in the organisation, it is important to strengthen meaningfulness in managers and within the organisation. A stronger sense of meaningfulness could impact even more on the affective commitment, and increase health levels and well-being within the organisation.

Future research should therefore focus on how salutogenesis and SOC could improve within the organisational setting, to further strengthen the organisational commitment of the managers.

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ANNEXURE A

RESEARCH FINDINGS

Health concepts and Sense of Coherence - SOC Questionnaire (SOCQ)

With regard to the research question "*How do managers at the selected organisation define the concepts of health and strategies of keeping healthy?*" the following was found. .

Managers define health with regard to the value and quality of life, the overall well-being, being active, being productive, being free of pain and sickness, diet, physical conditions, a balanced life and happiness.

To most of the managers health is an "overall well-being" (P3, P4, P11, P12):

Its well being, your overall wellbeing. And it's my mental state as well as my physical state. For me, that's what it is. If I say I'm unhealthy, it's not only because I feel it physically, but sometimes my mind might be so occupied and have so much of negative emotions and moods that I feel unhealthy. It completely brings me down as a person. So it's my overall holistic wellbeing, that's what I consider as health. (P3).

Managers feel healthy when they are "active" (P4, P9, P14, P16) and sticking to a healthy diet (P9, P13, P14):

Health means a lot to me. I enjoy exercising, walking, working at home, gardening, I don't have a gardener, and I do everything at home. At the same time, I do go to the gym, weight lifting, but not much though and cycling. Those are some of the things that I do. And also my diet. I always tell my wife it's better to eat healthy so that you won't be sick tomorrow, than to say I want to say, then I must not look after my health. Your health is your investment, that's why you have to look after yourself, even what you eat, that's very important. (P14).

"Health" to managers means that they value life and that they have a high quality of life (P1). "Being productive" (P6, P15, P17) is also of high importance, as well as being "free of sickness/pain" (P7, P10) and being in "good physical condition" (P5). A very important aspect of health for managers in this organisation is also a "balanced life" (P7, P8): "Health is a balance in life, to be able to see your family, to be able to work and put your time in." (P8). Happiness also plays an important part in being healthy (P17).

Summarising, health is a concept that is defined holistically with regard to physical, mental and spiritual aspects. It relates to the person, to the family relationships and the work situation, and is therefore a complex concept. It is not reduced to physical health and is

viewed in two cases as "being free of sickness/pain". In all other cases, health is a concept which is not negatively defined with regard to disease or sickness.

Managers are able to directly reflect their feelings and perceptions of being healthy.

Being energetic is for four managers highly important in feeling healthy (P4, P7, P10, P11), as P7 states:

When I feel healthy – I feel energetic. At the end of the day, if I've got energy when I've got to move fast in general, would probably be the easiest to define when I'm healthy. Obviously, when I don't feel like that then I know it's going the wrong direction.

Feeling "good, great" is for three managers an indicator of feeling healthy (P1, P13, P15) and having "a positive outlook" is mainly important for two managers (P2, P8):

Also, "feeling relaxed" is important: "I come back home, I'm relaxed." (P1). Other managers describe "feeling healthy" as feeling "light" (P3):

I don't have – if I have to start with my mind, I don't feel like there's something burdening me. In my mind I feel like I'm light, I can face the day and take on anything from a mind perspective. From a health perspective, if I don't have any ailments like flu and stuff, then I feel healthy from a physical perspective. But also, sometimes if I'm extremely tired, exhausted from work itself, I feel unhealthy that way, where there's too much of stress. Then I definitely feel unhealthy when there's stress.

Further on, "being at peace" (P9, P12), "being in control" (P4), being happy (P13) and being "not sick" (P9) are indicators for "feeling healthy". Finally, the concept of being "spiritually sound" (P12) shows that managers feel healthy:

When I feel healthy, it's when I feel spiritually sound, which means that I feel that I am connected to my God. Connected in the sense that there are no issues around condemnation and, you know, those other issues. And I usually feel at peace and content with myself. That's how I feel that part.

Managers generally feel that they can actively contribute to their health through positive relationships and activities, which relate to their high scoring in manageability. Managers keep healthy through their family and their private environment, by doing sports, by healthy nutrition, by meditation and reflection. They also keep their health through reading, meeting positive people, looking after themselves, spirituality and managing stress.

Doing "sports" (P1, P5, P6, P7, P8, P9, P10, P11, P12, P15, P16, P17) plays a key role in keeping healthy for many of the managers: "I swim every day I play hockey. I ride bikes. I'm an outdoors person. So it's a big part." Also keeping a healthy "nutrition" is of major importance (P1, P4, P6, P10, P11, P13, P14, P15, P16, P17):

And also sticking to the funny diet that the doctors give you when you are sick, like blood pressure pills and stuff like that. Like the food. Avoiding certain types of things. That's it. (P15).

The "family" and the personal environment are also highly important to keep healthy (P1, P5, P8, P17):

No, I think I'm fortunate that the home environment is very good. I'm married, I've got three girls. I get a lot of enjoyment out of home life and that's quite important, that helps from a psychological perspective. I interact a lot with my children. We spend a lot of time together. (P1).

Other managers think that keeping healthy is bound to meeting "positive people" (P4, P9, P16, P17) and "looking after yourself" (P2, P5, P11). For some managers, "meditation/reflection" (P3, P7) are activities to keep healthy, being able to live a "spiritual life" (P8, P9) and having time to "read" (P4). Finally, "managing stress" (P10, P14) is also very important for two managers:

I think being able to handle stress. Knowing what to do with stressful stuff, with situations, and how to approach that. And just having the confidence of knowing that this too shall pass. Not stressing about things. I think stress is the main cause of people not being healthy. So I think if you are to manage your stress well, exercise, eat the right foods, a little bit of junk here and there. (P10).

Based on the empirical evidence managers use a lot of different strategies to keeping healthy, which reflects their high scoring in manageability. At the same time, this finding shows that they are highly aware of their own influence on their health, which corresponds with the high scoring in comprehensibility.

In response to the research question: "*What is the SOC profile of managers at the selected organisation?*" the following findings are pertinent.

As can be seen in Table 2, manageability and comprehensibility were more important to managers than meaningfulness. A one-way ANOVA indicated that there were significant differences in the average scores for manageability, comprehensibility and meaningfulness

($F = 11.63916$, $df = 2.81$, $p\text{-value} = 0.00003$). Tukey's HSD test revealed that there were significant differences in the average scores for comprehensibility and meaningfulness ($p\text{-value} = 0.004269$) and manageability and meaningfulness ($p\text{-value} = 0.000259$). Manageability and comprehensibility were therefore more important to managers than meaningfulness.

Table 2: Sense of Coherence - Antonovsky SOC Questionnaire (SOCQ)

Sense of Coherence	Valid N	Mean	Standard Deviation
Manageability	27	53.22	6.83
Comprehensibility	28	52.79	7.06
Meaningfulness	29	45.55	6.32

To address the research question "*Is there a relationship between selected biographical variables such as gender, age and cultural group and SOC?*" the following research findings are relevant.

In Table 3, the difference between SOC/Life orientation and gender is shown. Levene's test indicated that the data provided insufficient evidence that the male and female populations had significantly different population variances. Separate T-tests were conducted on each SOC/Life orientation scale (shown in Table 3), using pooled estimates for the population variances. The results shown in the Table 3 indicate that there were no significant differences found between SOC/Life orientation dimensions and gender, at the 5% level of significance.

Table 3: Difference between SOC/Life orientation and gender

SOC/ orientation	Life	Mean	Mea	t- valu e	df	p	Valid	Vali	Std.Dev	Std.Dev
		n	n				N	d N		.
		Femal e	Male				Femal e	Male	Female	Male

Comprehensibility	50.86	53.43	-0.83	26	0.41	7	21	6.49	7.27
Manageability	55.29	52.50	0.93	25	0.36	7	20	5.41	7.24
Meaningfulness	49.57	44.27	2.04	27	0.05	7	22	4.43	6.36

One-way ANOVAs indicated that there were no significant differences (Table 4) in the average scores, on any of the scales, between the various age groups.

Table 4: Difference between SOC/Life orientation and age

SOC/Life orientation	SS	df	MS	SS	df	MS	F	p
	Effect	Effect	Effect	Error	Error	Error		
Comprehensibility	307.23	4	76.81	1037.48	23	45.108	1.70	0.18
Manageability	345.16	4	86.29	867.51	22	39.43	2.188	0.10
Meaningfulness	276.03	4	69.01	841.15	24	35.05	1.97	0.13

One-way ANOVAs indicated that there were no significant differences (Table 5) in the average scores, on the comprehensibility and manageability scales between the various cultural groups. However, significant differences in the average meaningfulness scores existed between the various cultural groups ($F = 3.751705$, $df = 3, 24$, p -value = 0.024284). Tukey's HSD test revealed that there were significant differences between the average African and Indian meaningfulness scales scores (p -value = 0.019743). The Indian respondents had significantly higher scores than the African respondents, indicating that the Indian respondents felt that they had more influence over the shaping of situations.

Table 5: Difference between life orientation and cultural group

Life orientation	SS	df	MS	SS	df	MS	F	p
	Effect	Effect	Effect	Error	Error	Error		
Comprehensibility	267.38	3	89.13	1074.02	23	46.70	1.91	0.156

Manageability	102.27	3	34.09	955.27	22	43.42	0.79	0.52
Meaningfulness	356.55	3	118.85	760.30	24	31.68	3.75	0.02

7.1.4 Organisational Commitment Survey (OCS)

With regard to commitment, the research question *"How do managers at the selected organisation define OC?"* will be answered.

Managers viewed employees as treating each other with tolerance and respect. Some managers did not see any collegial support; they saw a change in diversity management and an attitude to work in silos. They also saw friendly and communicative people and employees being in comradeships. Some managers emphasised the influence of the old generation in the organisation and an unproductive attitude amongst employees.

Managers viewed their colleagues' treatment of each other as "tolerant/respectful" (P1, P2, P3, P4, P5, P8, P12, P13, P15, P16) and as being able to "change" with regard to diversity (P1, P3, P7, P17):

I think we are pretty well adjusted; we are pretty tolerant of each other, particularly around cultural issues. As best as possibly can be. There are obviously still niggles and there are still historical backgrounds to us. You know we might be a ten year old company but we've inherited staffs who have worked for 40 years for government. So there's still different ways of looking at people around that sort of situation (P1).

Four managers selected "friendly/communicative/ comradeship" (P9, P10, P11, P15): "I think there is that comradeship of the workers at the organisation." (P15). Two managers selected the missing collegial "support" (P13, P14), the attitude to "work in silos" (P9, P14) and the "old generation/unproductive people" (P3, P8).

Generally, managers were satisfied to work in this organisation and felt highly committed, particularly owing to the respectful and friendly relationships with colleagues. They said that they were "emotionally bound" to the organisation because of friendly communication, comradeship and friendliness of colleagues (e.g. P9, P11, P15).

They would not feel any financial loss (P3, P4, P6, P7, P10, P11, P14, P17) when leaving the organisation, only a loss of collegial relationships, job satisfaction, an enabling environment, having a positive impact on others, losing the nice environment of the city and East London and losing a high technological standard.

However, managers thought they would lose "collegial relationships" (P7, P9, P11, P14): "The biggest loss in my section, because I think I've got a wonderful bunch of guys that work in my team really." (P14). Two managers indicated that they would lose "job satisfaction" (P14, P15), have an "enabling work environment" (P1, P9), being able to have a "positive impact on others" (P3, P5, P6), "technology" (P1) and having to move away from the "city/ East London area": (P2, P9, P16): "But for now, I like the area. I love East London. It's not about the organisation alone, but it's the area." (P9).

In order to address the research question: "*What is the organisational commitment profile of managers at the selected organisation?*" the following research findings are pertinent.

From Table 6 it is evident that the majority of respondents (59.3%) showed a preference for affective commitment. This implies that, according to Allen and Meyer (1997:16), the individual is considered to have an affective or emotional attachment to the organisation such that the strongly committed individual identifies with, is involved in, and enjoys membership in the organisation. According to Wasti (2003:304), affective commitment has the strongest and most consistent difference with advantageous outcomes for the organisation, and has been very well researched previously.

Table 6: Organisational commitment profile and number of respondents

OC	Number of Respondents	Percentage (%)
Affective Commitment	16	59.3
Continuance Commitment	5	18.5
Normative Commitment	3	11.1
Normative/Affective	3	11.1
Total	27	100.0

It is also shown in Table 6 that 18.5% of the respondents had a continuance commitment, where they continued to work for the selected organisation because the costs that were associated with leaving were too high. As can be seen, only 11.1% of respondents had a normative commitment to the selected organisation; this implies that they felt obliged to continue working for the selected organisation. In addition, 11.1% of the respondents had an equal score for both normative and affective commitment; it is not uncommon for employees within organisations to concurrently share two or more of the organisational commitment profiles. In this regard Allen and Meyer (1997) point out that this is the second-best commitment profile for an employee to have, besides a purely affective commitment.

As can be seen in Table 7, a one-way ANOVA indicated that there were significant differences between the average scores of the scales ($F = 8.027101$, $df = 6, 186$, $p\text{-value} = 0.000816$). A Tukey's HSD test revealed that there was a significant difference between Affective commitment and Continuance commitment.

Table 7: OCS Scales

	SS	df	MS	SS	df	MS	F	p
	Effect	Effect	Effect	Error	Error	Error		
Value	236.76	2	118.38	1167.04	77	15.16	7.81	0.000816

To answer the following research question pertaining to the "relationship between selected biographical variables such as gender, age and cultural group and OC", the following research results are apparent.

Levene's test indicated that the data provided insufficient evidence that the male and female populations had significantly different population variances. Separate T-tests were conducted on each organisational commitment scale, using pooled estimates for the population variance, shown in Table 8. No significant differences between the average male and average female scores were found for any of the organisational commitment scales.

Table 8: Difference between OCS and gender

	Mean Female	Mean Male	t- value	df	p	Valid N Female	Valid N Male	Std.Dev. Female	Std.Dev. Male
Affective Commitment	20.00	21.60	-1.18	25	0.25	7	20	3.27	3.03
Continuance Commitment	16.86	17.05	-0.10	25	0.92	7	20	4.74	4.57
Normative Commitment	17.17	19.50	-1.30	24	0.21	6	20	2.79	4.10

As can be seen in Table 9, one-way ANOVAs indicated that there were no significant differences in the average score, on affective commitment and continuance commitment organisational culture scales, between the various age groups. There was a significant

difference in the average normative commitment score between the various age groups ($F = 2.9485$, $df = 4, 21$, $p\text{-value} = 0.0443$).

Table 9: Difference between OCS and Age

	SS	df	MS	SS	df	MS	F	P
	Effect	Effect	Effect	Error	Error	Error		
Affective Commitment	37.08	4	9.27	214.99	22	9.77	0.95	0.45
Continuance Commitment	120.54	4	30.14	411.46	22	18.70	1.61	0.21
Normative Commitment	137.73	4	34.43	245.23	21	11.68	2.95	0.04

As shown in Table 10, one-way ANOVAs indicated that there were no significant differences in the average score, on any of the organisational commitment scales, between the various cultural groups.

Table 10: Difference between OCS and cultural groups

	SS	df	MS	SS	df	MS	F	P
	Effect	Effect	Effect	Error	Error	Error		
Affective Commitment	15.87	3	5.29	236.20	23	10.27	0.52	0.68
Continuance Commitment	104.72	3	34.91	427.27	23	18.58	1.88	0.16
Normative Commitment	49.08	3	16.36	333.88	22	15.18	1.08	0.38

Relationship between SOC and OC

The research findings pertaining to the last research question: *"What is the relationship between SOC and OC at the selected organisation?"* are addressed in this section. In response to the research question, *it is found that there was no statistically significant relationship between affective organisational commitment and a sense of comprehensibility, manageability, and meaningfulness.*

As can be seen in the Table 11, there is no significant linear relationship between affective organisational commitment and a sense of: comprehensibility ($n = 26$, $r = -0.0466$, $p = 0.825$);

manageability (n= 26, r=-0.3105, p=0.131); and meaningfulness (n= 26, r=-0.1436, p=0.494).

Table 11: Correlations of affective, continuance and normative commitment with the sense of comprehensibility, manageability and meaningfulness

N=25 (Case wise deletion of missing data)	Affective Commitment	Continuance Commitment	Normative Commitment
Comprehensibility	-.0466 p=.825	-.1619 p=.439	-.0985 p=.640
Manageability	-.3105 p=.131	-.6033 p=.001	-.3091 p=.133
Meaningfulness	-.1436 p=.494	-.4132 p=.040	-.2172 p=.297

Despite there being no significant linear relationships between affective organisational commitment and a sense of comprehensibility, manageability, and meaningfulness, a linear model was fitted to these data. It was found that none of the independent variables were significant in this model (F = 0.95911, df = 3.22, p-value = 0.42949).

In response to the research question, *it is found that there was a statistically significant relationship between continuance organisational commitment and sense of manageability and meaningfulness*

As can be seen in Table 11, there is no significant linear relationship between continuance organisational commitment and sense of comprehensibility (n= 26, r=-0.1619, p=0.439). There is, however, a significant negative linear relationship between continuance organisational commitment and sense of: manageability (n= 26, r=-0.6033, p<0.001) and meaningfulness (n= 26, r=-0.4132, p=0.040).

A linear model was fitted to estimate the relationship between continuance organisational commitment and a sense of comprehensibility, a sense of manageability and a sense of meaningfulness. It was found that sense of manageability was the only variable that was significant in this model, (F = 5.5750, df = 3.22, p-value =0.00532).

In response to the research question, *it is found that there was no statistically significant relationship between normative organisational commitment and sense of comprehensibility, manageability, and meaningfulness.*

As can be seen in Table 11 above, there is no significant linear relationship between normative organisational commitment and a sense of: comprehensibility (n= 26, r=-0.0985, p=0.640); manageability (n= 26, r=-0.3091, p=0.133); and meaningfulness (n= 26, r=-0.2172, p=0.297).

Despite there being no significant linear relationships exist between normative organisational commitment and a sense of comprehensibility, manageability and meaningfulness a linear model was fitted to these data. It was found that none of the independent variables were significant in this model, (F = 0.77542, df = 3.22, p-value = 0.52076).