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Perceptions of opportunity recognition behaviour in the South African financial sector

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UNIVERSITY OF THE WITWATERSRAND

FACULTY OF COMMERCE, LAW AND MANAGEMENT

Perceptions of Opportunity Recognition Behaviour in the South African Financial Sector

By

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A research report submitted in partial fulfilment of the requirements for the degree Master of Management in Entrepreneurship & New Venture Creation

Supervisor: Professor Boris Urban

October 2011

DECLARATION

I, Eric Anthony Wood, declare that this Research Report is my own work, apart from acknowledgement as indicated in the text and references. It is submitted in partial fulfilment of the requirements for the degree Master of Management in Entrepreneurship & New Venture Creation. It has not been submitted before, in whole or part, for any degree at any university or tertiary education institution.

_____

Eric Anthony Wood

Signed on the _____ day of _____ 2011

ACKNOWLEDGEMENTS

“Writing a book is an adventure. To begin with, it is a toy and an amusement; then it becomes a mistress, and then it becomes a master, and then a tyrant. The last phase is that just as you are about to be reconciled to your servitude, you kill the monster, and fling him out to the public” (Winston Churchill).

Whilst this dissertation is not a book, it has certainly taken much effort. Without the assistance and tolerance of a number of people the completion of this research would not have been possible:

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LIST OF ABBREVIATIONS

GEM	Global Entrepreneurship Monitor
JSE	Johannesburg Stock Exchange
FSB	Financial Services Board
SARB	South African Reserve Bank
TEA	Total Entrepreneurial Activity Rate

EXECUTIVE SUMMARY

The world is in the midst of a new wave of economic development with entrepreneurship and innovation as the catalysts. The ability to continually innovate and to engage in an ongoing process of entrepreneurial action has become the source of competitive advantage and a lack of entrepreneurial actions in today's global economy could be a recipe for failure (Kuratko, 2009).

Organisations need to keep abreast of developments in their business environment and continually identify and evaluate opportunities if they are to prosper in a rapidly changing world, and they must become more entrepreneurial as their corporate environments become more dynamic and increasingly competitive (Shepherd, Patzelt and Haynie, 2009).

Opportunity recognition remains an important issue for academic research. This research report aims at making a modest contribution to further understand opportunity recognition behaviour of employees within their existing work environment. The research focussed on employees working in the South African financial sector, and examined their perceptions of opportunity recognition behaviours and motivators. An understanding of these important behaviours and motivators will allow senior management of corporate entities to have a better understanding of the opportunity recognition processes by employees, and to put in place mechanisms that facilitate and support these processes in search of robust entrepreneurial activities. Apart from the economic rationale, the motivations for studying employees' behaviour come mainly from the limited number of studies of this nature that have been carried out in emerging economies.

The study is performed using data from 195 employees drawn from 23 financial sector companies in South Africa. This research concludes that South African financial sector employees perceive themselves as showing strong levels of opportunity recognition behaviours, and opportunity recognition motivators are also perceived important in promoting entrepreneurial initiatives. The empirical study reveals that there is a significant positive relationship between opportunity recognition behaviours and the frequency of opportunities recognised.

Success is found to have a moderating effect on the relationship between frequency of opportunity recognition and perceptions of opportunity recognition behaviours. Respondents, who have a low or medium number of successfully implemented opportunities, recognise a higher number of opportunities as their opportunity recognition behaviour increases. However, those respondents with a high number of successfully implemented opportunities tend to show a slight decrease in the total number of opportunities identified as their opportunity recognition behaviour increases.

A cluster analysis was carried out to provide a deeper understanding of opportunity recognition behaviours and motivators, and three distinct clusters with differing characteristics were identified. These clusters are named according to the characteristics displayed by the respective clusters (corporate achievers, mavericks, and doers).

The **corporate achievers** cluster tends to perceive high levels of opportunity recognition behaviours and motivators. This high proportion of perceived alignment to company strategy combined with high levels of opportunity recognition behaviours may encourage more of the proposed opportunities to be in line with company strategy, which in turn may lead to the higher proportion of successfully implemented opportunities.

The **mavericks** cluster recognise a large number of opportunities, but are behind the corporate achiever cluster when it comes to the proportion of successfully implemented opportunities and perceive low alignment to company strategy. Although this cluster shows a large proportion of opportunities proposed for their current company, their low perception of alignment to company strategy may mean that the opportunities they recommend do not always fit into the company strategy, which may explain their lower proportion of successfully implemented opportunities.

The **doers** cluster tends to perceive low levels of opportunity recognition behaviour and motivators, as well as low levels of alignment to company strategy. Respondents in this cluster seem to do their work, but show low levels of entrepreneurial orientation.

CONTENTS

DECLARATION ii

ACKNOWLEDGEMENTS iii

LIST OF ABBREVIATIONS iv

EXECUTIVE SUMMARY v

CHAPTER I 1

1 Introduction to the Study 1

1.1 Introduction 1

1.2 Problem Statement 3

1.3 Purpose of the Research 3

1.4 Definition of Constructs 4

1.5 Assumptions 5

1.6 Significance of the study 5

CHAPTER II 7

2 Literature Review 7

2.1 Entrepreneurship 7

2.2 Corporate Entrepreneurship 8

2.2.1 Defining Corporate Entrepreneurship 8

2.2.2 Contextualizing Corporate Entrepreneurship 9

2.2.3 Promoting Corporate Entrepreneurial Activity 11

2.2.4 Organizational Antecedents of Entrepreneurial Behaviour 15

2.3 Keys Aspects of Entrepreneurship & Opportunity Recognition 20

2.3.1 The Role of Entrepreneurship and the Individual 20

2.3.2 Opportunity Recognition 21

2.3.3 Cognitive Framework in Opportunity Recognition 24

2.4 Interactions between Entrepreneurial Motivations, Opportunities and Environmental Conditions 27

2.4.1 The Roles of Behaviours and Motivators in the Entrepreneurial Process 30

2.4.2 Contextualizing the Research Objectives 32

2.5 RESEARCH QUESTIONS 35

2.5.1 Hypotheses 36

CHAPTER III 38

3 Research Methodology 38

3.1 Common Method Bias 38

3.2 Research Instrument for the Study 39

3.3 The Sample Frame 40

3.4 Criteria for Selection of Sample Members 41

3.5 The Measures 43

3.6 Data Analysis 44
3.6.1 Factor Analysis 44
3.6.2 ANOVA Tests 45
3.6.3 Regression Analysis 45
3.7 Reliability and Validity 46
3.7.1 External validity 46
3.7.2 Internal and Construct validity 46
3.7.3 Reliability 47
3.8 Limitations of the study 47

CHAPTER IV 49
4 Analysis and Discussion 49
4.1 Introduction 49
4.2 The Sample 50
4.3 Demographic Analysis 50
4.4 Internal Consistency Reliability of scales 55
4.5 Statistical Test Results 57
4.5.1 Hypothesis 1 60
4.5.2 Hypothesis 2 61
4.5.3 Hypothesis 3 61
4.5.4 Hypothesis 4 65

4.5.5 Hypothesis 5 67

4.5.6 Cluster Analysis 72

4.5.7 Cluster Analysis Conclusion 83

CHAPTER V 84

5 Conclusion, study limitations and areas for further research 84

5.1 Conclusion 84

5.2 Limitations and Future Research 95

REFERENCES 96

APPENDICES 107

Appendix 1: Questionnaire 107

Appendix 2: Consistency Matrix 115

TABLE OF FIGURES

Figure 1: Strategic Entreprenurship - A value creating intersection between strategy and entreprenurship (Ireland and Webb, 2007: 51) 10

Figure 2: An integrative model of corporate entrepreneurship strategy (Ireland, Covin and Kuratko, 2009: 24) 17

Figure 3: The impact of operations control variables on the relationship between antecedents of corporate entrepreneurship and innovation performance (Goodale et al, 2011: 117) 19

Figure 4: From a market need to a successful enterprise (Ardichvili et al, 2003: 112) 23

Figure 5: The model and units for the opportunity identification and development theory (Ardichvili et al, 2003: 118) 24

Figure 6: The potential role of pattern recognition in opportunity recognition (Baron, 2006: 112) 25

Figure 7: Model of entrepreneurial motivation and entrepreneurship process (Shane et al, 2003: 274) 28

Figure 8: Model of the entrepreneurial process (Baron, 2002: 233) 29

Figure 9: Combined Respondent Demographics 51

Figure 10: Breakdown of Respondent Financial Sector Companies 52

Figure 11: Total career Length 52

Figure 12: Time employed by current employer 53

Figure 13: Company size by number of employees 53

Figure 14: Sex of respondents 54

Figure 15: Education levels of respondents 54

Figure 16: Age of Respondents 55

Figure 17: Opportunity recognition behaviours vs frequency of opportunity recognition 64

Figure 18: Opportunity Recognition Motivators vs Opportunities Successfully Pursued 66

Figure 19: Interaction of Success on the Relationship between Frequency and Behaviour 69

Figure 20: Plot of means for each Cluster by Construct 73

Figure 21: Analysis of cluster means vs Opportunity Recognition Behaviour 74

Figure 22: Analysis of cluster means vs opportunity recognition motivators 75

Figure 23: Analysis of cluster means vs alignment to company strategy 76

Figure 24: Analysis of clusters by key differentiating factors 79

LIST OF TABLES

Table 1: Cronbachs Alpha and inter item correlation of the constructs 56

Table 2: Individual Questions with Means and Standard Deviations 58

Table 3: Construct Questions with Means and Standard Deviations 60

Table 4: Comparison of opportunity recognition behaviour means by frequency of opportunity recognition 62

Table 5: Scheffe Post Hoc Analysis - Opportunity Recognition Behaviours 63

Table 6: Frequency and Means of recoded categories 65

Table 7: Correlation matrix 68

Table 8: Analysis of moderation effect of success on the relationship between frequency and opportunity recognition behaviours 68

Table 9: Analysis of moderation effect of success on the relationship between frequency and opportunity recognition motivators 71

Table 10: Wilks Lambda Test of Significance 77

Table 11: Means of the Clusters by Construct 77

Table 12: Scheffe Post Hoc Analysis of Clusters 78

CHAPTER I

1 Introduction to the Study

1.1 Introduction

Organisations need to keep abreast of developments in their business environment, and continually identify and evaluate opportunities if they are to prosper in a rapidly changing world. Organisations must become more entrepreneurial as their corporate environments become more dynamic and increasingly competitive (Shepherd, Patzelt and Haynie, 2009). This entrepreneurial and competitive imperative for organisations is more apparent when it becomes clear that organisations no longer just have to be locally competitive, but have to be internationally competitive in the global economy.

Opportunities establish the foundations of sustainable entrepreneurship enabling entrepreneurial rents while simultaneously improving local and global social and environmental conditions (Cohen and Winn, 2007). Entrepreneurship can be described as the process of first discovering, and second acting on a disequilibrium opportunity (Kaish and Gilad, 1991). Entrepreneurial opportunities can therefore be seen as central to the entrepreneurial process. Entrepreneurial opportunities have been broadly defined as a set of environmental conditions that lead to the introduction of one or more new products or services in the marketplace by an entrepreneur or by an entrepreneurial team through either an existing venture or a newly created one (Dutta and Crossan, 2005).

Within the corporate environment managers at all structural levels have critical strategic roles to fulfil for the organisation to be successful (Ireland, Covin and Kuratko, 2009). Corporate entrepreneurship is pursued in the light of opportunities and threats, with the objective of creating a more effective alignment between company's aspirations and conditions in its external environment (Hornsby, Kuratko, Shepherd and Bott, 2009). Corporate managers need to evaluate and propose ideas and opportunities in order to maintain and improve the company's competitiveness.

Individual risk taking behaviour is important for entrepreneurship in existing organisations (Hoang and Antoncic, 2003).

South Africa has some way to go in order to achieve the levels of entrepreneurial activity of developed countries, and also in achieving the entrepreneurial activity of some of its peers in developing nations. South Africa's total entrepreneurial activity rate (TEA) remains amongst the lowest in the developing nations (Global Entrepreneurship Monitor, 2009) with the majority of its entrepreneurial activity concentrated on necessity entrepreneurship rather than opportunity or growth entrepreneurship. In developed countries a significant portion of economic growth rates can be attributed to high-expectation entrepreneurs; however in emerging countries this effect is absent (Valliere and Peterson, 2009). Any study to thoroughly understand entrepreneurial activities in South Africa would help to uncover the entrepreneurial environment and help unlock value for economic development and employment creation in the country.

Understanding the opportunity recognition process represents one of the core intellectual questions for the domain of entrepreneurship (Urban, 2009, Casson and Wadeson, 2007). Entrepreneurial research still endeavours to understand why some individuals and not others identify more opportunities (Shane and Venkataraman, 2000).

Improved understanding of opportunity identification helps in identifying crucial aspects necessary for cultivating entrepreneurial ventures in the country, thereby contributing to economic growth and social development. In the same vein, it is argued that improving understanding of opportunity identification can assist in ensuring that new knowledge is translated into tangible business innovations and practical solutions that contribute to economic and social development (Ucbasaran, Westhead and Wright, 2009). Previous academic studies have shown that experienced entrepreneurs identify more opportunities, albeit at a diminished rate as their experience increased (Ucbasaran et al, 2009).

South Africa has a sophisticated financial sector comparable to those of many first world nations. This financial sector is an important component of the South African economy and a significant provider of employment. Entrepreneurial activity needs to be promoted and supported in this important sector of the economy. People need to work closely together in the new product development process as a result of the intangible nature of product innovation in financial services sector (Vermeulen, 2003).

This research focuses on the financial services sector with the objective of gaining a deeper understanding of the opportunity recognition behaviour of employees operating in this sector.

1.2 Problem Statement

Research on opportunity recognition remains a fundamental area of focus, but prior research has mainly focussed on the entrepreneur or the team of entrepreneurs operating within their own ventures, or the anticipated establishment of their new ventures. Little research has been conducted in order to understand better opportunity recognition by employees within existing ventures, and in addition little research of this nature has been conducted in emerging economies (Bruton, Ahlstrom and Obloj, 2008).

Attempting to understand these important behaviours and motivators is the main thrust of this research endeavour and is expected to provide senior management of corporate entities with a better understanding in order to guide the opportunity recognition process by employees and consequently allow for improved facilitation and support of these processes.

1.3 Purpose of the Research

The research focuses on employees working in the financial services sector. This research aims to achieve a better understanding of the perceptions of these employees regarding their behaviours and motivators underlying the process of opportunity recognition within their corporate environments.

It is therefore important that these behaviours and motivators are understood in order to advance opportunity recognition within corporate environments. If the senior management of corporate entities understand the opportunity recognition process by employees, they will promote improved facilitation and support of opportunity recognition in an attempt to sustain entrepreneurial initiatives and turn new business ideas into profitable business ventures.

1.4 Definition of Constructs

The main constructs which are necessary to introduce the research problem are defined below. These constructs include entrepreneurship behaviours and motivators as part of the entrepreneurial process. All the other constructs which are used in this research will be defined where they first appear in the document.

Entrepreneurial behaviour is the human behaviour involved in identifying and exploiting opportunities (Bird, Schoedt and Baum, 2011). For purposes of this study behaviours relate to the actions that employees take with reference to opportunities.

Motivators include both intrinsic and extrinsic motivation. Intrinsic motivation refers to an interest or enjoyment in the task itself, and exists within the individual rather than relying on any external pressure, whilst extrinsic motivation comes from outside of the individual (for example financial rewards). Entrepreneurial motivation is an inner drive towards entrepreneurial goals. It energizes, directs and sustains new venture creation and growth (Baum et al, 2007). This study has not attempted to differentiate between intrinsic and extrinsic motivators.

Behaviours are actions and therefore also activities of individuals. Employee behaviours that will be examined in this research document are those behaviours of entrepreneurs which are relevant to identifying and exploiting opportunities.

Intrinsic motivation refers to an interest or enjoyment in the task itself, and exists within the individual rather than relying on any external pressure, whilst extrinsic motivation comes from outside of the individual such as financial rewards (Benabou and Tirole, 2003). Emotions influence not only opportunity evaluation, but also opportunity exploitation (Grichnik, Smeja and Welpe, 2010).

Apart from the financial motivator, the specific motivators that will be used in this research have been based on the specific classes of motivators that are captured in the analytical framework reported in Shane, Locke and Collins (2003).

1.5 Assumptions

An assessment has not been made of the corporate entrepreneurial activities that each of the companies involved in this study has undertaken. All corporate participants are deemed to be supportive of an entrepreneurial environment within their organisations.

No analysis has been done to ascertain clear risk reward relationships between employees and their employer with regard to entrepreneurial activity undertaken by the employee on behalf of the employer.

Employees' self assessment is used to generate data for this research project. It is assumed that the data gathered using this technique adequately reflects reality. The study, however, does not evaluate the details of the opportunities and the subsequent success or failure of the business opportunities acted upon by the business entity. As such the assumption is made that all successful opportunities are equal and that the converse is also true, that all unsuccessful opportunities are equal.

1.6 Significance of the study

The global business environment is becoming increasingly competitive and corporate entrepreneurial activity is receiving increasing prominence to allow for the survival and future competitiveness of corporate entities. Employees need to be encouraged and nurtured to search for and provide opportunities for their respective employers. An understanding of the behaviours and motivators of employees to act entrepreneurially in the search for and identification of business opportunities will assist in:

a) Adding to the existing body of knowledge in this regard;
b) Keeping innovative culture alive in their companies;
c) Providing a better understanding of behaviours and motivators that their companies need to concentrate on in order to promote entrepreneurial initiatives.

Improved understanding of these important behaviours and motivators will allow senior management of corporate entities to have a better understanding of the opportunity recognition processes by employees and put in place mechanisms that facilitate and support these processes in search of robust entrepreneurial activities.

CHAPTER II

2 Literature Review

2.1 Entrepreneurship

Entrepreneurship as a discipline has been gaining popularity across the globe and is widely perceived as an important source of economic growth and employment creation. Entrepreneurial activity enhances the competitiveness of the economy in global markets and potentially creates new employment opportunities (Kuckertz and Wagner, 2010). Entrepreneurship can be defined as the search process of alternative or new opportunities instead of just alternative employment opportunities (Lee and Venkataraman, 2006).

Some of the most important mechanisms through which entrepreneurship affect economic growth are discussed in economics text books, journals and scholarly articles. Entrepreneurship drives innovation and technical change and generates economic growth (Schumpeter, 1934, in Casson, 2005, and Di Gregorio, Musteen and Thomas, 2008). This is usually captured by the technology parameter in a standard Cobb-Douglas production function[1]. Consequently many countries have created institutions to promote entrepreneurial activities or have initiated steps to increase the volume of entrepreneurial activities in order to benefit from the resulting economic growth (Baron, 2002; Mueller & Thomas, 2000). "The world is in the midst of a new wave of economic development with entrepreneurship and innovation as the catalysts" (Kuratko, 2009: 421). The ability to continually innovate and to engage in an ongoing process of entrepreneurial action has become the source of competitive advantage and a lack of entrepreneurial actions in today's global economy could be a recipe for failure.

[1] Cobb-Douglas production has the form $Y = AK^{\propto}L^{1-\propto}$. Y represents output whereas K and L are for capital and labour, respectively. As indicated above, α is a technology parameter. A measures the percentage of income going to capital owners while 1-α represents the percentage of income going to workers.

2.2 Corporate Entrepreneurship

2.2.1 Defining Corporate Entrepreneurship

Entrepreneurial behaviour may be defined as the discovery, evaluation and exploitation of entrepreneurial opportunities (Shane and Venkataraman, 2000). Corporate entrepreneurship may be seen as the application of this entrepreneurial behaviour by employees of existing enterprises. Corporate entrepreneurship can therefore be seen as a subset of entrepreneurship (i.e. entrepreneurial activity that originates within established ventures).

Corporate entrepreneurship can be defined as a “combination of formal and informal activities aimed at creating not only new business ventures, but also other innovative activities such as the development of new products, services, technologies, administrative techniques within established firms based on new resource combinations, acquisitions of skills and capabilities and individual initiative to extend firm’s activities in areas unrelated or marginally related to the current domain of competence” (Belousova. Gailly and Basso, 2009: 1). Corporate entrepreneurship strategy, on the other hand, is a “vision–directed, organization-wide reliance on entrepreneurial behaviour that purposefully and continuously rejuvenates the organization and shapes the scope of its operations through the recognition and exploitation of entrepreneurial opportunity” (Ireland, Covin and Kuratko, 2009: 19). Corporate entrepreneurship has two primary aims: the creation and pursuit of new venture opportunities and strategic renewal (Dess and Lumpkin, 2005).

2.2.2 Contextualizing Corporate Entrepreneurship

Dramatic and ongoing changes force executives to regularly re-examine the basic purpose of their organizations, and become much more flexible in their approach to serving multiple stakeholders (Kuratko, 2009). Companies therefore find themselves having to continually redefine their markets, restructure their operations, and modify their business models in order to remain competitive and relevant. As companies move from one stage of their development cycle to the next, they often have to revamp their skills and build innovative capabilities to survive, achieve profitability, and stimulate growth (Zahra, Filatotchev and Wright, 2008). Corporate entrepreneurship involves organizational learning, driven by collaboration, creativity and individual commitment (Hayton, 2005).

"The dynamic entrepreneurial organizations of this 21st century will be ones that are capable of merging strategic action with entrepreneurial action on an ongoing basis" (Ireland, Camp and Sexton, 2001, in Kuratco, 2009: 426).

Strategic entrepreneurship captures firm's efforts to simultaneously exploit today's competitive advantages while exploring for the innovations that will be the foundation of tomorrow's competitive advantage (Ireland and Webb, 2007). They suggest that strategic entrepreneurship is a value creating intersection between strategy and entrepreneurship and propose the following model to explain the process.

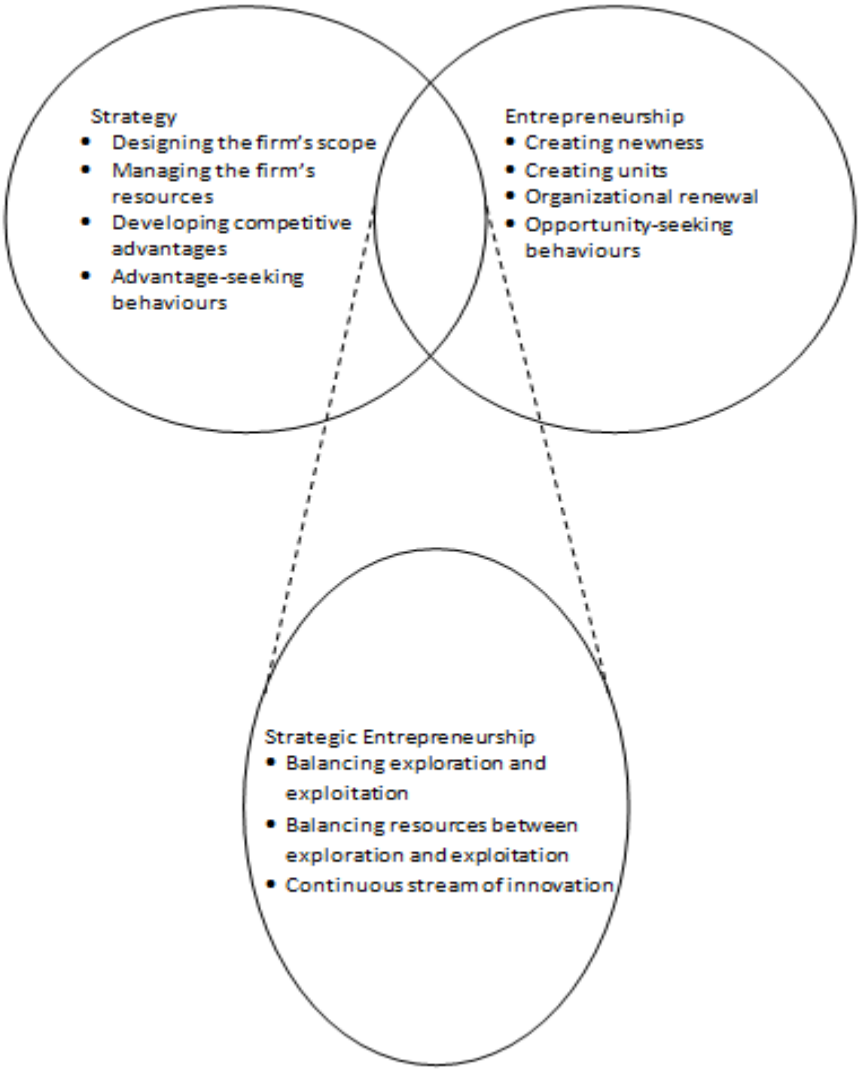

Figure 1: Strategic Entreprenurship - A value creating intersection between strategy and entreprenurship (Ireland and Webb, 2007: 51)

The model suggests that strategic entrepreneurship, as a strategy pursued in a corporate entrepreneurship environment, results from combining attributes of strategy and entrepreneurship. A firm should combine exploration oriented attributes with exploitation oriented attributes to develop consistent streams of innovation and to remain technologically ahead of competitors (Ireland and Webb, 2007).

Business entities in countries where entrepreneurship is highly promoted serve as agents of innovation and have a tendency of continually churning out new products for domestic and foreign markets. Corporate entrepreneurship performs a unique role of resource-capital configuration and transformation in emerging market firms by continuously renewing firm competencies so that congruence with the changing environment can be achieved (Yiu and Lau, 2008). Entrepreneurial behaviour within organisations is generally regarded as a vehicle for increased organizational growth and profitability, strategic renewal, organisational change and customer value added services (Kuratko, 2005; Thornberry, 2001; and Zahra, 1996; in Zampetakis, Beldekos and Moustakis, 2009). Entrepreneurial orientation enhances corporate performance (Madson, 2007; and Rauch, Wiklund, Lumpkin and Frese, 2009) and entrepreneurial orientation should lead to a pay-off for a firm at least over time and that firms not aiming for this may be less successful in the long run. Since findings show entrepreneurial orientation to have positive effects on firm performance, ways to develop or motivate entrepreneurial orientation behaviours and promote the context that supports such behaviours need to be devised (Poon, Ainuddin and Junit, 2006).

2.2.3 Promoting Corporate Entrepreneurial Activity

Promoting entrepreneurship at the firm level may require that the firm's strategies, culture and the entire incentive system need to be aligned to ensure effectiveness of entrepreneurial initiatives. Organisations can and should be viewed as entrepreneurial entities (Covin and Slevin, 1991).

Since findings showed entrepreneurial orientation to have positive effects on firm performance, ways to develop or motivate entrepreneurial behaviours and promote the context that supports such behaviours need to be devised (Poon, Ainuddin and Junit, 2006). They go further to state that entrepreneurs are advised to create a work environment that is conducive to maintaining a continuous and proactive state of innovativeness and risk-taking. Individual entrepreneurial cognitions and external environmental conditions are the initial impetus for adopting a corporate entrepreneurial strategy (Ireland, Covin and Kuratko, 2009).

The implementation of a corporate entrepreneurial strategy may be difficult as the results of current research may run counter intuitive to existing ideas and thinking. As an example of this counter intuitive research, Zampetakis, Beldekos and Moustakis, (2009), state that tenure moderates the relationship between perceived organisational support (POS) and entrepreneurial behaviour such that the positive relationship between POS and entrepreneurial behaviour is stronger for employees with less tenure, compared to employees with high tenure.

This suggests that management should pay attention to differences in employee tenure when providing entrepreneurial support and enabling structures.

Corporate entrepreneurship is usually modelled as a learning process in which firms alternately engage in exploration followed by the exploitation of resulting discoveries (Phan, Wright, Ucbasaran and Tan, 2009).

Strategy development and organizational structure need to be supportive of entrepreneurial initiatives. A strategic competitive advantage may not be created where the corporate governance system does not incentivize and monitor management to undertake the appropriate actions to recognize opportunities, and to gather and utilize resources (Phan et al, 2009). However, corporate entrepreneurial strategy cannot be consciously chosen and quickly enacted. This is so because the strategy requires more than a decision, act, or event. It requires congruence between the entrepreneurial vision of the organizations leaders and the entrepreneurial actions of those throughout the organization as facilitated through the existence of a pro-entrepreneurship organizational architecture (Ireland et al, 2009).

Corporate innovation and the entrepreneurial activity that’s needed from employees is being embraced by executives today as more than simply a component of a company’s strategy, but rather as a focus of an organization’s success (Kuratko, Covin and Garret, 2009).

Sound corporate strategies along with supportive organizational structures do not, however, guarantee success unless they are properly communicated within the organization (Shepherd, Covin and Kuratko, 2009). For success to be recorded using corporate entrepreneurship, those within the firm must be aware of it and must be encouraged and nurtured in their use of it.

While anecdotal evidence suggests that whilst firms may be diligent in developing programs aimed at promoting entrepreneurial activity, the prospect of failure still looms large. An entrepreneurial strategy is not easy to create, is hard to perpetuate within the organization, and requires the commitment of individual employees throughout the organization in order to achieve success (Hornsby et al, 2009; Kuratko, 2009).

The key to maintaining relatively high levels of entrepreneurship within a company lies in understanding the basic nature of the entrepreneurial experience, recognising the inherent entrepreneurial potential of all employees, and creating work climates that allow employees to act on that potential (Morris, Van Vuuren, Cornwall and Scheepers, 2009). This is reinforced by the view that an appropriate work environment is necessary to foster entrepreneurial activity (Li, Su and Liu, 2010). In addition, company efforts to enhance employee knowledge sharing are associated with increased firm performance (Hsu, 2006). Knowledge is increasingly recognised as the key underpinning resource (Lemon and Sahota, 2004). Effective innovation requires the creation, capture, harvest, sharing and application of knowledge and expertise.

At the organisational level, efforts of cultural change towards increased entrepreneurial activities (e.g. by providing appropriate rewards or communicating an entrepreneurial vision) can start a self-perpetuating spiral which makes the organizational culture more entrepreneurial beyond the level of entrepreneurial activity that the manager intended (Shepherd, Covin and Kuratko, 2009). Alignments must be created in evaluation and reward systems such that the organization is able to encourage and achieve appropriate entrepreneurial behaviours at the organizational and individual levels (Kuratko, 2009).

The presence of rewards/ reinforcements for innovative actions and initiatives may best promote innovative behaviours when risk controls are emphasised (Goodale, Kuratko, Hornsby and Covin, 2011). Innovative behaviours and initiatives that are both rewarded and have been subjected to careful risk evaluation will likely gain impetus within the firm (Balkin and Logan, 1988, and Kanter, 1994; in Goodale et al, 2011).

"The rewards will induce and support innovative behaviours and initiatives that have been consciously judged to have an acceptable risk-return probability, the combination of which would likely result in high innovation performance outcomes" (Goodale et al, 2011: 117). Corporate entrepreneurship is not a static state, but a dynamic process whereby managers can inspire employee's enthusiasm efficiently through more effective incentive measures (Zhang, Wan and Jia, 2008).

The concern is less with the creativity of individuals or how they think, and more with experimentation and disruption of the dominant order (Shinderhutte and Morris, 2009). Furthermore, efforts should be made to strive against the "business as usual" mentality and shift away from finding simple right answers and moving more towards finding the right problems.

Firms that create a culture in which experimentation and change is the consistent course of action will be more successful (Ireland and Webb, 2007). In some environments, the careful execution of previously learned routines might not be an entrepreneurial act (Zahra, Korri and Yu, 2005). An entrepreneurial act is not only the product of an organizational culture but it also changes the industry significantly. "Radically innovating while venturing into a new foreign market or adopting a radically new business model that alters the dynamics of competition or redefining the value chain differently from existing competitors are examples of entrepreneurial acts that have the potential to change their environments" (Zahra, 1991, in Zahra et al, 2005: 142).

Apart from the corporate strategy and structure, the overall corporate culture therefore needs to support a strong entrepreneurial working ethic where tolerance for failure and higher level of efficacy must be nurtured within the organization. The

realization that failure is part and parcel of the process of entrepreneurial ventures is an important ingredient for successful entrepreneurial initiatives.

One must recognize that there is no guarantee that all entrepreneurial initiatives will be successful and some of the initiatives may not be translated into successful business ventures. Entrepreneurial projects are essentially experiments with indefinite outcomes and firms must consider that frequent entrepreneurial project failures are an integral part of corporate entrepreneurial initiatives. An organisation's outlook on failure may affect the degree to which it is able to attract and retain employees with low versus high coping self efficacy (Shepherd, Covin and Kuratko, 2009). A normalization strategy for managing project failure-induced grief would involve communications, policies and norms which convey that failed entrepreneurial projects are common, to be predicted and, in general, failed entrepreneurial projects need to be regarded as "no big deal" occurrences (Shepherd et al, 2009). Firms should be cognizant of the likelihood of failure of ventures, and discontinued ventures should be viewed as learning experiences, not failures (Ireland and Webb, 2007).

2.2.4 Organizational Antecedents of Entrepreneurial Behaviour

Though an organization has put in place the necessary strategy and structure supportive of entrepreneurial initiatives, and after having communicated the rationales for pursuing entrepreneurial activities, the organization now needs to identify the internal and external environmental factors that can induce and set in motion the process of entrepreneurial initiatives across the company.

There are five stable organizational antecedents of entrepreneurial behaviour by middle managers (Kuratko, 2009):

1. ***Management Support***- Top level managers should be willing to support, facilitate and promote entrepreneurial behaviour.
2. ***Work discretion/autonomy***- Top level managers should be committed in their toleration of failure, should provide freedom and latitude from excessive oversight and should delegate authority to middle managers.

3. ***Rewards/reinforcement***- A rewards system should be developed based on performance, encouraging the pursuit of challenging work and highlighting significant achievements.

4. ***Time availability***- Ensuring that the individuals or groups who are required to fulfil the corporate entrepreneurial strategy have the time needed to pursue innovations.

5. ***Organizational boundaries***- Precise explanations of outcomes expected from organizational work, and development of mechanisms for evaluating, selecting and using innovations.check spacing here

An integrative model of corporate entrepreneurship strategy that incorporates antecedents of entrepreneurship strategy is suggested in the literature (Ireland, Covin and Kuratko, 2009). The distinguishing feature of this model is the depiction of how corporate entrepreneurship can be manifested as an identifiable strategy, as inferable from the presence of patterns of entrepreneurial behaviour and an overall perspective that directs entrepreneurial activity.

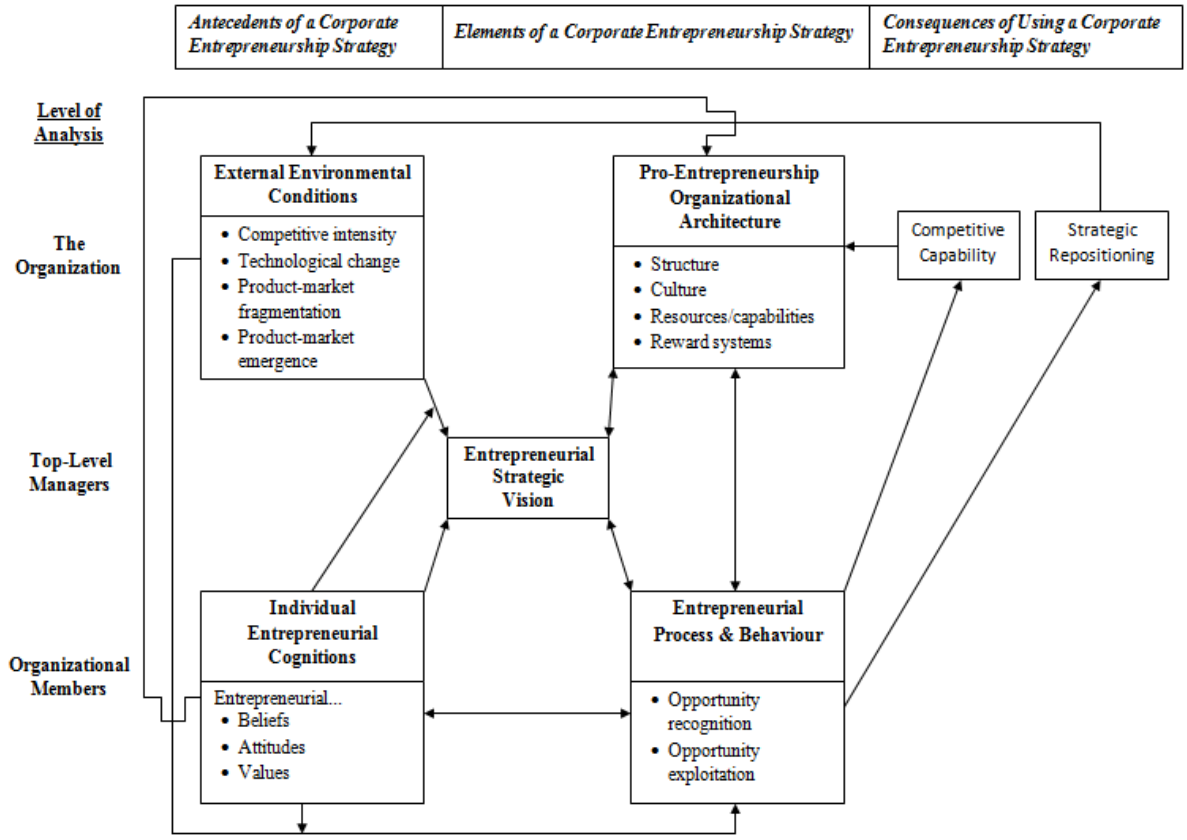

Figure 2: An integrative model of corporate entrepreneurship strategy (Ireland, Covin and Kuratko, 2009: 24)

The model in Figure 2 proposes that corporate entrepreneurial strategy manifests through the presence of three elements:

- An entrepreneurial strategic vision
- A pro-entrepreneurship organizational structure
- Entrepreneurial processes and behaviour as exhibited across the organizational hierarchy

The model relies on continual entrepreneurial behaviour as captured in the "Entrepreneurial processes and behaviour" portion of the model in Figure 2.

The model lists the antecedents of a corporate entrepreneurial strategy as individual entrepreneurial cognitions of the organization's members, and external environmental conditions that invite entrepreneurial activity.

As compared to Kuratko (2009), Ireland et al (2009) do not seem to rate work discretion/autonomy, time availability and precisely laying the organizational boundaries as important antecedents of corporate entrepreneurial strategy.

The factors that drive entrepreneurial activity in established firms (including resource support for innovative ideas, and high levels of worker discretion in the performance of tasks) may not result in superior innovation performance if operations control mechanisms are not in place (Goodale, Kuratko, Hornsby and Covin, 2011). In the absence of operations control mechanisms, firms that manifest corporate entrepreneurial activity may tend to generate an incoherent mass of interesting but unrelated opportunities that may have profit potential, but do not move firms towards a desirable future (Getz and Tuttle, 2001, in Goodale et al, 2011). Hence, the following model is proposed by Goodale et al, (2011), in Figure 3, that incorporates the impact of operations control variables on the relationship between antecedents of corporate entrepreneurship and innovation performance.

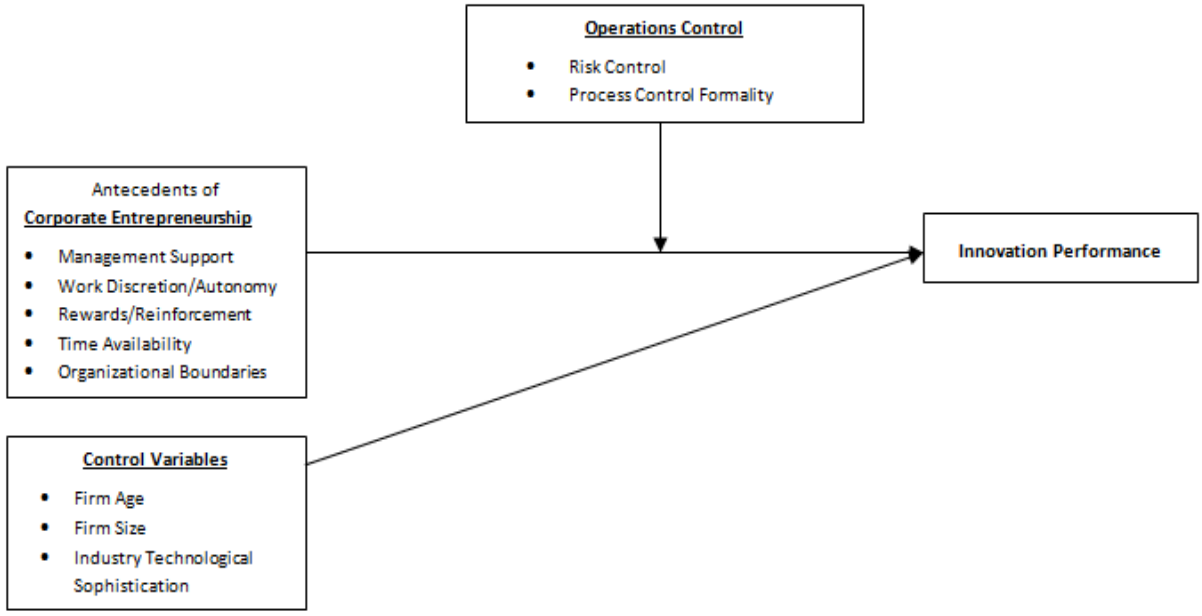

Figure 3: The impact of operations control variables on the relationship between antecedents of corporate entrepreneurship and innovation performance (Goodale et al, 2011: 117)

Standardizing and formalizing some of the decision rules used for guiding the exploration of opportunities creates routines of knowledge search that have the potential to reduce the amount of financial and human capital that is inappropriately used or wasted (Goodale et al, 2011). The strategy to create an efficient organisation sets the stage for an enterprising employee (Hjorth, 2004). It is in this light that we may conclude that corporate entrepreneurial behaviour without appropriate decision rules (including management operations control as articulated in the model in Figure 3) may not always be good for the organization. Consequently, the encouragement of corporate entrepreneurship can and often does result in counterproductive, rogue behaviour by organizational members (Kuratko and Goldsby, 2004, in Goodale et al, 2011).

2.3 Keys Aspects of Entrepreneurship & Opportunity Recognition

2.3.1 The Role of Entrepreneurship and the Individual

As discussed earlier, there appears to be little disagreement among academics and scholars concerning the role of entrepreneurship. For instance, there seems to be little doubt that entrepreneurship is a major force behind the strong performance of the United States economy (Baron, 2002). Nevertheless, it has been indicated that our understanding of entrepreneurship and the factors that influence it remain limited. Many researchers appeared to have entertained long held beliefs that studies on entrepreneurship should not focus on behavioural traits. It is argued that entrepreneurship as a discipline has dual roots in economics and behavioural sciences (Baron, 2002). In spite of this argument, many researchers in the field put extreme emphasis on economic factors while ignoring or at least downplaying the importance of entrepreneurs.

This view, however, is challenged by a considerable number of scholars who argue that entrepreneurship could not be viewed in isolation from the behaviours of the entrepreneur. Some scholars have expressed criticisms concerning the omission of human motivation from the entrepreneurial process (Baumol, 1968; Shane and Venkataraman, 2000, as quoted in Shane, Locke and Collins, 2003).

Highlighting the gravity of the problem, it is eloquently argued that the study of entrepreneurship that does not explicitly consider entrepreneurs is like the analysis of Shakespeare in which “the Prince of Denmark has been expunged from the discussion of Hamlet” (Baumol, 1968, in Shane et al, 2003: 260). The entrepreneurial process occurs because people act to pursue opportunities. People differ in their willingness and abilities to act on these opportunities because they are different from each other.

The significance of motivators for the entrepreneurial process can be appreciated if we view the process as a willing endeavour of employees. Firms depend on the willing engagement of employees to lend their efforts to entrepreneurial projects (Monsen, Patzelt and Saxton, 2009).

The act of entrepreneurship therefore occurs as the agent specifies, interprets, and acts upon the sources of opportunity (Sarason, Dean and Dillard 2006). Recognizing individual differences and the resulting impact on entrepreneurship could also strengthen the case for thoroughly studying individual behaviours and motivators. Personality differences and intrinsic motivation are likely to affect ones persistence to pursue an idea, ones likelihood to abandon one's beliefs in the idea, and one's desire and ability to discuss and defend the idea in a broader social context (Dimov, 2007). Developing a deeper understanding of the complexities of the creative product and situation associated with opportunity recognition represents a fruitful area for advancing entrepreneurship research.

2.3.2 Opportunity Recognition

Opportunities represent an integral component of the entrepreneurial process. Entrepreneurial opportunities are defined as "objective situations that entail the discovery of new means-ends relationships through which new goods, services, raw materials, and organising methods can be introduced to produce economic value" (Casson, 1982, in Mcmullen, Plummer and Acs, 2007: 273). There is an alternative definition of entrepreneurial opportunities that states "opportunities are created through both the acceptance and competent use of commonly accepted scripts (recognition), accidental script change through copy errors (recognition-formation) and script related play and change (formation)" (Chiasson and Saunders, 2005: 747).

Recognising and exploiting opportunity is the essence of entrepreneurial behaviour as well as the defining processes of entrepreneurship (Shane and Venkataraman, 2000). The exploitation of opportunities is a vital part of the economy's response to external shocks (Casson and Wadeson, 2007). Better understanding of opportunity identification can assist in ensuring that new knowledge is translated into tangible business innovations and practical solutions that contribute to economic and social development (Ucbasaran, Westhead and Wright, 2009). When it comes to understanding the process of opportunity recognition, beyond descriptive mapping or linear process models, understandings of how and why business ideas "locate" with

particular individuals at particular points in time are still fairly underdeveloped (Fletcher, 2006).

The process of opportunity recognition starts with the sensing of a need or a possibility for change and action and ends with an innovative solution in which future potential economic value is clear enough and externally recognised (Therin, 2007).Opportunity recognition appears to include three distinct processes (Ardichvili, Cardozo and Ray, 2003):

1. *Sensing or perceiving market needs between market needs and/or unemployed resources*
2. *Recognising or discovering a fit between particular market needs and/or underemployed resources*
3. *Creating a new fit between heretofore separate needs and resources in the form of a business concept*

A five step entrepreneurial process is suggested through which an opportunity progresses to the point where it becomes a successful enterprise (Ardichvili, Cardozo and Ray, 2003) as depicted in Figure 4 below.

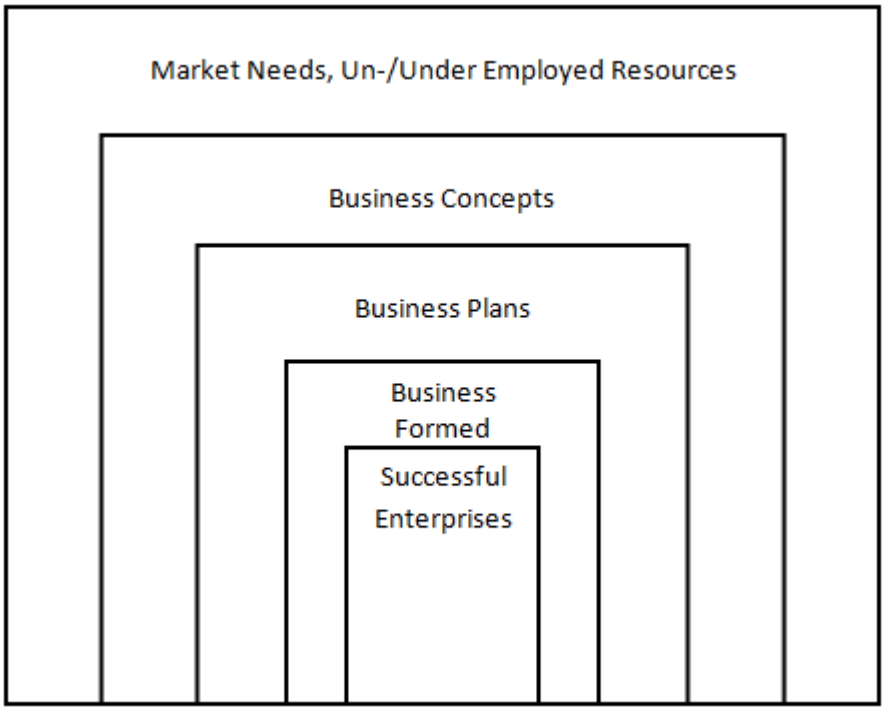

Figure 4: From a market need to a successful enterprise (Ardichvili et al, 2003: 112)

Opportunities that do not successfully pass through a gate (as depicted in Figure 4 above) to the subsequent stage of development may have to be revised or aborted. The model suggests that an evaluation is conducted at each stage of the development of the opportunity.

The success of businesses hinges on their ability to develop opportunities. An integrated model that incorporates opportunity identification and development assumes the opportunity development process as cyclical and iterative process (Ardichvili et al, 2003). "An entrepreneur is likely to conduct evaluations several times at different stages of development" (Ardichvili et al, 2003: 112). These evaluations could lead to refinement or adjustments to the initial opportunity or possibly uncover additional opportunities.

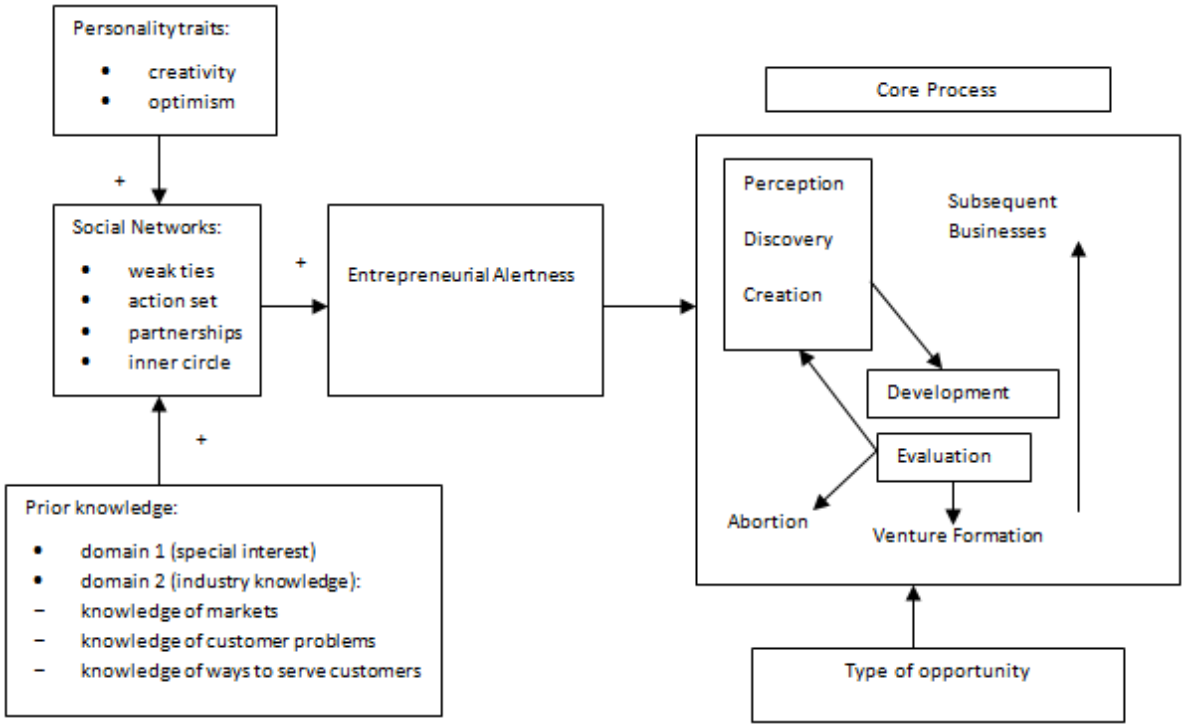

Figure 5: The model and units for the opportunity identification and development theory (Ardichvili et al, 2003: 118)

The integrated model represented in Figure 5 suggests that entrepreneurial alertness is central to the opportunity identification process. Entrepreneurial alertness in turn is influenced by personality traits, social networks and prior knowledge pertaining to the entrepreneur. The type of opportunity evaluated plays an important role in determining the core process.

Opportunity recognition is a multistage process in which entrepreneurs play proactive roles and that both individual and situational differences can influence the process as depicted in Figure 5 (Ardichvili et al, 2003).

2.3.3 Cognitive Framework in Opportunity Recognition

Academic thinking around opportunity recognition claims that entrepreneurs utilise cognitive frameworks that they have acquired through experience to perceive connections between seemingly unrelated events or trends in the external world (Baron, 2006).

In the same vein, opportunity recognition is viewed as an iterative process whereby the entrepreneur revises his concept several times (Vaghely and Julien, 2010; Zahra, Korri and Yu, 2005). However, it is further stated that the revisions are subject to entrepreneurial cognitive biases and hubris. They explain this statement by stating that the entrepreneur's personality plays an important role in making evaluations, which in turn are subject to serious cognitive biases such as overconfidence, and holding strong beliefs of what can or cannot be done.

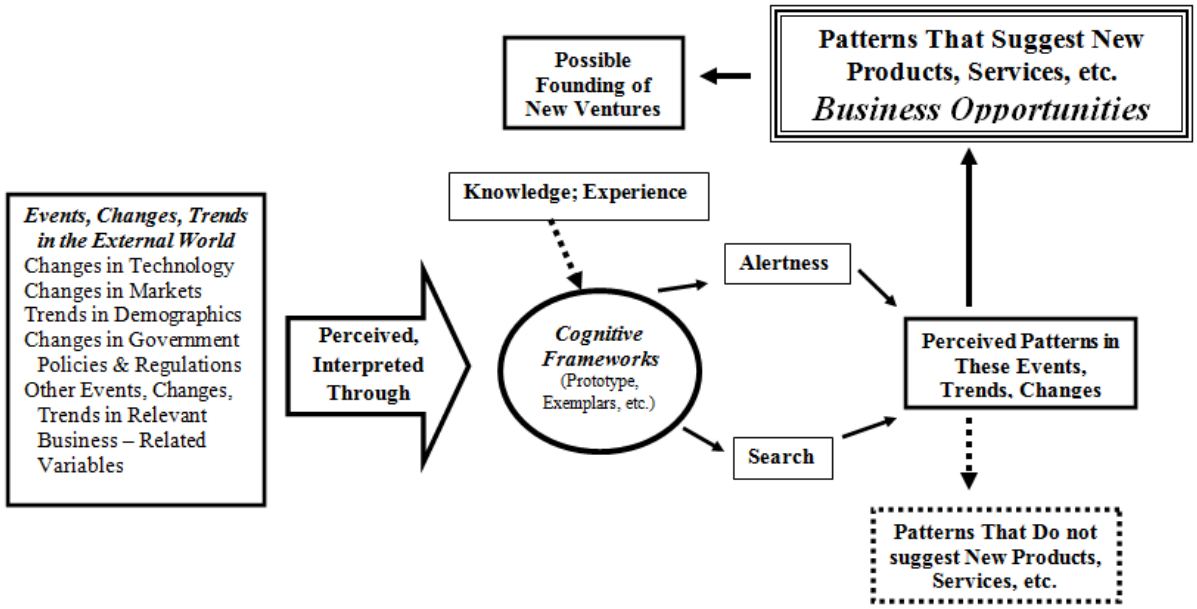

Figure 6: The potential role of pattern recognition in opportunity recognition (Baron, 2006: 112)

This pattern recognition on opportunity recognition as shown in Figure 6 helps integrate three factors that have been found to play important role (Baron, 2006):

1. Engaging in an active search for opportunities
2. Prior knowledge of an industry or market
3. Alertness to opportunities

It is suggested that pattern recognition helps explain interrelationships between the three factors, as well as helping to explain why some persons but not others identify certain opportunities, and also suggests specific ways in which current or prospective entrepreneurs can be trained at better recognising opportunities.

Prior knowledge of an industry or market is an important component in the opportunity recognition process (Ardichvili et al, 2003; Baron, 2006; Corbett, 2007; and Corbett, 2005). However, this is in contradiction with the view that past experience may promote a rigid focus on familiar clues, causing new information to be ignored and that given the entrepreneurs extensive past experiences, newer situations may not generate surprises that trigger sense making and overlooking emerging opportunities (Shepherd and Detienne, 2005; Zahra, Korri and Yu, 2005).

Cognitive frameworks, pattern recognition and entrepreneurial alertness discussed in the previous models may be influenced by the entrepreneur's prior experience, and prior experience may not be a positive influence on opportunity recognition (Zahra et al, 2005). Indeed it may limit entrepreneurs to identifying prior patterns and opportunities within the boundaries of their experience. Companies may be blinded by their past experiences which have the potential to slow their decisions (Zahra et al (2005).

"As human beings, we seek to minimize cognitive effort, just as we seek to minimize physical effort. As a result, we often use various short cuts in our thinking; techniques that reduce mental effort" (Baron, 1998: 275).

Whilst this application of human cognition may sometimes be effective, it could lead to serious errors in understanding the world around us, and limit our ability to efficiently identify and implement entrepreneurial opportunities.

Apart from opportunity recognition behaviours, human motivations constitute integral components of the entrepreneurship process (Baum et al, 2007). Nevertheless, measuring the impact of human motivations on entrepreneurship process has never been easy.

2.4 Interactions between Entrepreneurial Motivations, Opportunities and Environmental Conditions

An analysis of the literature reveals at least three factors that influence the entrepreneurial process, namely motivational factors, cognitive factors (including ability, intelligence and skills) and environmental factors which comprises of the status of the economy, the availability of venture capital, the actions of competitors and government regulations.

Scholars have long been interested in explaining the corporate environmental factors that encourage organizational members to act entrepreneurially (Monsen, Patzelt and Saxton, 2009). Corporate entrepreneurship is pursued in the light of environmental opportunities and threats with the purpose of creating a more effective alignment between the company and conditions in its external environment (Hornsby, Kuratko, Shepherd and Bott, 2009).

The use of the analytical framework presented in Shane, Locke and Collins (2003), presented in Figure 7 below, helps to gain a deeper understanding of the interplay that might exist between the factors that influence the entrepreneurship process.

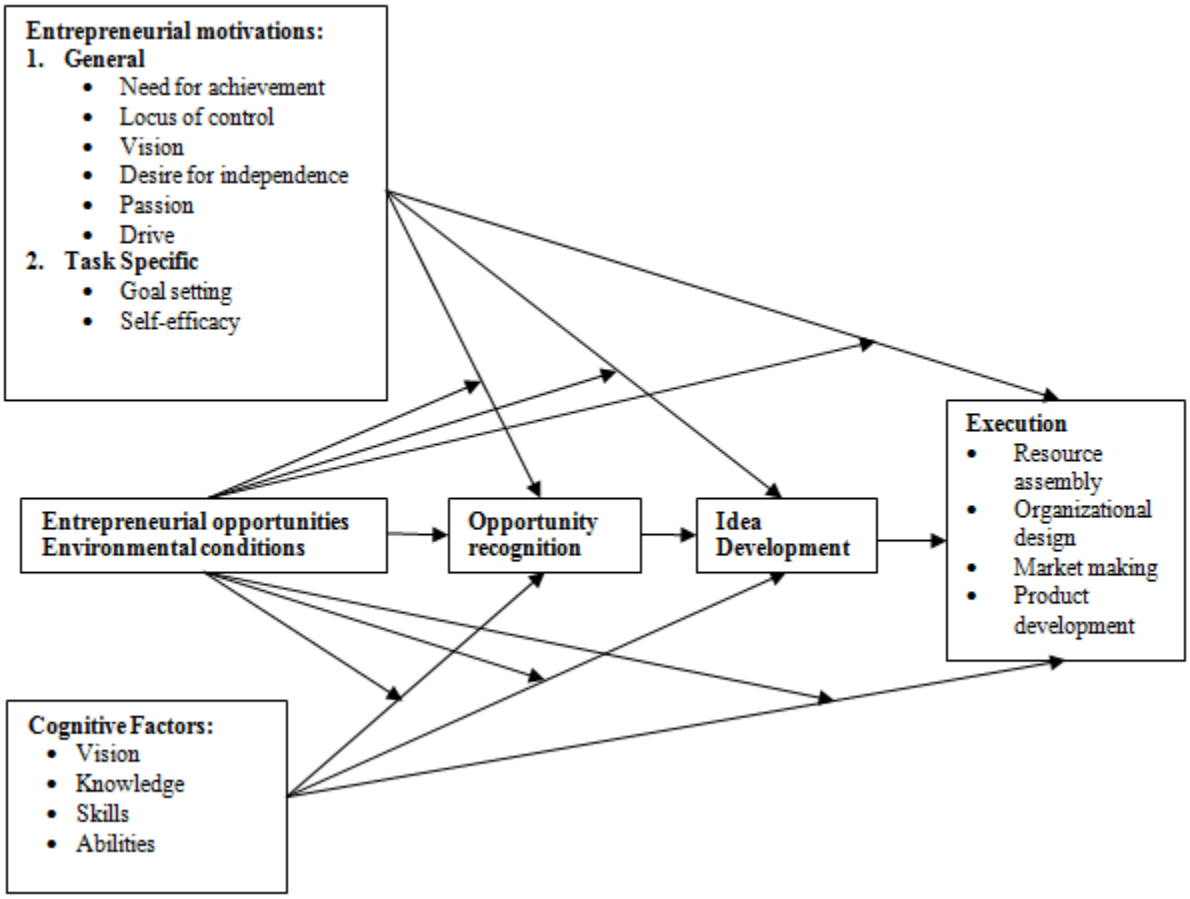

Figure 7: Model of entrepreneurial motivation and entrepreneurship process (Shane et al, 2003: 274)

The following important issues are apparent from the above analytical framework:

Firstly, entrepreneurship should be viewed as a process not as a static phenomenon. **Secondly**, there is a clear interaction between entrepreneurial motivations, opportunities, and environmental conditions. Cognitive factors also interact with opportunities and environmental conditions. In the event that there is a clear interaction between the factors as shown in Figure 7 above, it would be extremely difficult to determine the impact of each of these factors on the entrepreneurial process. The ambiguity that is witnessed in prior research on the role of entrepreneurial motivations on entrepreneurial process might have been partly attributed to the interactions captured in Figure 7 above.

Thirdly, the realization that a particular human motivation may not be equally important at the different stages is crucial for deeper understanding of the entire entrepreneurial process. For instance, the need for achievement may be more important at the stage of idea development rather than at the execution stage.

One has to recognize that the above is not the only analytical framework that helps us to understand the entrepreneurial process. An alternative analytical framework is presented below.

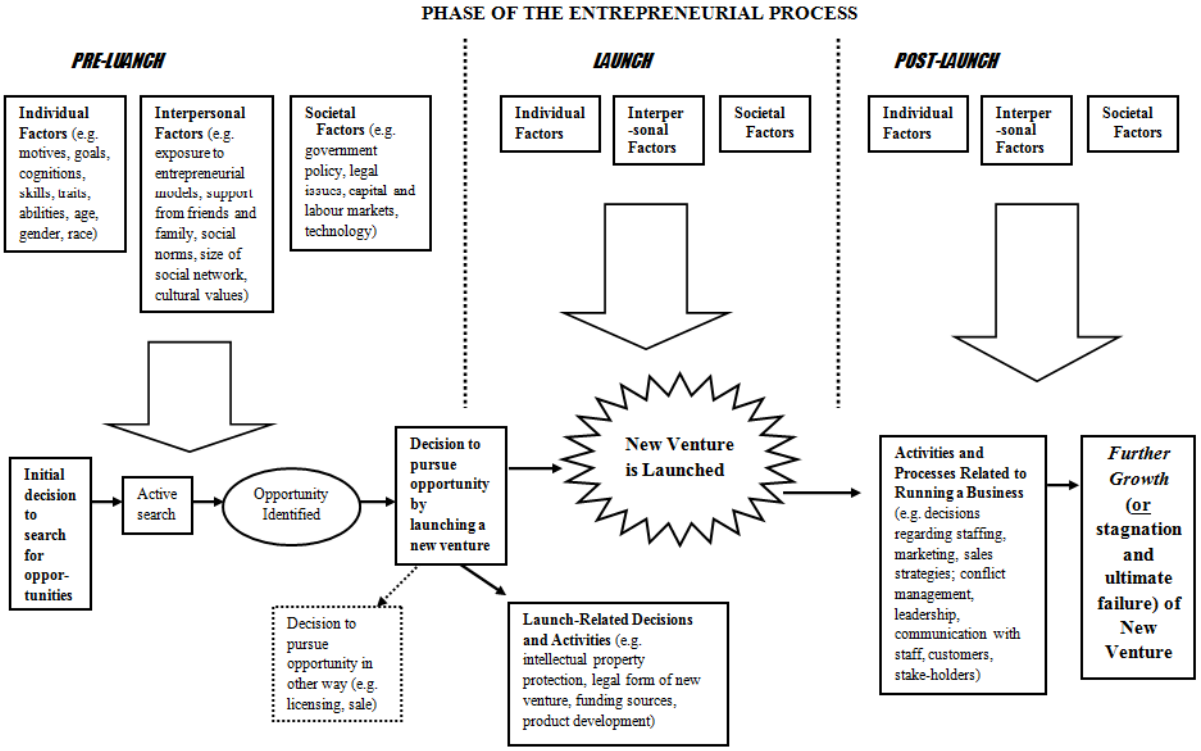

Figure 8: Model of the entrepreneurial process (Baron, 2002: 233)

The specific framework that is presented in Figure 8 divides entrepreneurship into three discrete stages: prior to the launch of a new venture (pre-launch phase), the period following the launch of a new venture (the start-up phase – generally assumed to encompass the first twelve to twenty-four months of a new venture's existence) and further development beyond the initial start-up period.

This model takes note of the factors that are encapsulated earlier as motivational, cognitive and environmental factors. Though the categories of factors that are presented in Figure 8 are broad, they identify those important factors discussed in the framework presented in Figure 7.

Even though the focus of this research endeavour is on human motivation, the role of non-motivational differences is duly recognized in this paper. As stated earlier, the important factors that influence the entrepreneurial process will make it difficult to measure the impact of human motivations unless some kind of control is put in place. In this study, there is a plan to control the factors that are likely to confound the impact of human motivations on entrepreneurial process. The plan is to draw all the sample members to the study from one industry, i.e. the financial sector.

2.4.1 The Roles of Behaviours and Motivators in the Entrepreneurial Process

The following represent the principal motivations for thoroughly studying in this research, the role of human behaviours and motivations in the entrepreneurship process.

- Human motivations have supposedly greater significance for the entrepreneurial process. The potential role of motivation is that the entrepreneurial process occurs because people actively choose to pursue opportunities that they have identified (Baron, 2002). Thus, the decision to become an entrepreneur is the first crucial step in the process. Human motivation – a process of central interest to the field of organizational behaviour – appears to be one key determinant of the decision to become an entrepreneur.

  Emotional signals individuals receive from their environment influence their motivation to act entrepreneurially (Brundin, Patzelt and Shepherd, 2008, in Zampetakis et al, 2009.

- Organizational behaviour, with its focus on human behaviour in work settings, can be an invaluable source of hypotheses and insights for the field of entrepreneurship. To the extent that entrepreneurs are indeed central to the

entire process, then understanding their behaviour – why they choose to become entrepreneurs in the first place, how they make decisions, why they do or do not recognize opportunities, how they seek to influence others, and how they coordinate with their co-founders is crucial to understand the entrepreneurial process.

- Full understanding of the entrepreneurship process could not be claimed without comprehending the traits that characterize or set apart entrepreneurs from the rest of the population;

- Effectiveness of any policy intervention by government could be enhanced with a proper understanding of the integral components of the entrepreneurship process;

- This research provides the opportunity to further examine the ambiguities discussed about the impact of some of the motivations on the entrepreneurship process (Baum et al, 2007);

- The literature on entrepreneurship appeared to have concentrated heavily on firm founders. This focus might have been prompted as a result of narrowly defining entrepreneurship. Entrepreneurship can be narrowly defined as starting up a new firm rather than involving in an entrepreneurial activity. Entrepreneurship is presented as a process by which “opportunities to create future goods and services are discovered, evaluated and exploited” (Shane et al, 2003: 257). This definition does not require viewing entrepreneurs as the founders of new organizations.

- Firm performance is a function of organizational as well as individual level behaviour (Covin and Slevin, 1991). They go further to state that behaviours rather than attributes are what give meaning to the entrepreneurial process and behaviour is the central and essential element in the entrepreneurial process. Entrepreneurial behaviour captures all actions taken by an organisation’s members that relate to the discovery, evaluation and exploitation of entrepreneurial opportunities (Kuratko, Ireland, Covin and Hornsby, 2005, in Zampetakis et al, 2009). Firm level entrepreneurial behaviour is affected by and

therefore can be managed through the creation of particular organizational strategies, structures, systems and cultures. Achieving entrepreneurial actions is not something that management can simply decide to do (Kuratko, 2009). Corporate innovation does not produce instant success. It requires considerable time and investment, and there must be continual reinforcement. Organizations impose constraints on entrepreneurial behaviour. The entrepreneurial values have to be integrated into the mission, goals, strategies, structure, processes and values of the organization in order to be sustainable (Kuratko, 2009).

- Measuring the motivations of potential entrepreneurs and examining the correlation between the decisions made in these simulations, researchers could determine how motivations influence entrepreneurial decisions (Shane, Locke and Collins, 2003). They suggest that researchers should consider how motivations might influence some people to make different decisions from others in the entrepreneurial process, and the development of entrepreneurship theory requires consideration of the motivations of people making entrepreneurial decisions.

2.4.2 Contextualizing the Research Objectives

The following are the main objectives that this research endeavour will attempt to achieve and draw important conclusions about the aspects that have been alluded to above. Accordingly, this research aims to accomplish the following:

- Achieve a better understanding of entrepreneurial behaviours and motivators which entrepreneurial employees exhibit and which in turn may be fostered to promote entrepreneurship in organizations. Whilst entrepreneurial behaviour on the part of individuals is neither controllable nor predictable, it can be fostered and facilitated (Morris, Van Vuuren, Cornwall and Scheepers, 2009). As indicated earlier, the lack of complete understanding of the impact of motivations and behaviours on entrepreneurship process does not assist organizations and government agencies to come up with effective tools and mechanisms to encourage employees to participate in entrepreneurial activities.

- The more employees perceive they are receiving support from the organisation, the more they might be expected to feel a sense of obligation and be inclined to reciprocate in both attitudinal and behavioural ways (Zampetakis, Beldekos and Moustakis, 2009). We may further academic knowledge towards the question; Do employees perceive a supportive corporate environment for entrepreneurial activity and does a perception of a supportive environment lead to increased opportunity recognition and implementation of a greater number of opportunities? (Zampetakis, Beldekos and Moustakis, 2009).

- Further academic understanding as to how the behaviours of employees are affected by failed opportunities and how the company's treatment of failed opportunities affects future opportunity recognition behaviours of employees. The belief of a social stigma attached to entrepreneurial failure is an important constraint for entrepreneurial activity (Vaillant and Lafuente, 2007). Rewarding seemingly failed efforts is antithetic to most corporate rewards systems, but if the risks taken were prudently planned and properly executed, a failed initiative must be rewarded as if it were a success (Morris, Van Vuuren, Cornwall and Scheepers, 2009).

- Investigate how employees perceive corporate reward systems in influencing their entrepreneurial behaviours and motivations. Rewards, if properly designed, are compelling instruments that can mobilise organisational commitment and build an entrepreneurial culture (Morris, Van Vuuren, Cornwall and Scheepers, 2009).

  They define these rewards as:

  - Creation of financial upside;
  - Providing social incentives including formal acknowledgement from management, granting of freedom, and the allocation of company resources to support employee ideas; and
  - Provide security against the downside of entrepreneurial risk taking.

It is a central theme of economics that incentives promote effort and performance, and that there is a lot of academic evidence that they do (Benabou and Tirole, 2003). However, they state further that current rewards may decrease the individual's willingness to persist, because they orient activity toward performance rather than progress. In other words the individual may be led by short term rewards to the detriment of long term payoffs. They also state therefore that explicit incentive schemes may sometimes backfire, especially in the long run, by undermining agents' confidence in their own abilities or in the value of the rewarded task. Given this academic debate around the value of incentives it is important to understand how employees view incentives as a motivator towards the identification and implementation of entrepreneurial opportunities.

- Moderating effects, mediating effects, independent effects and interaction effects provide a useful framework for gaining additional insights into the entrepreneurial orientation - performance relationship (Lumpkin and Dess, 1996, in Antoncic and Hisrich, 2004). It is this kind of interaction that will be examined using statistical techniques to investigate the potential moderation effect of the interaction of frequency and success of opportunity recognition by employees.

- Employees need to know about and understand the strategic vision of the organization (Kuratko, 2009). This understanding is a critical element of any strategy that requires innovative entrepreneurial inputs from the employees. This shared vision requires the identification and understanding of specific objectives of the corporate entrepreneurial strategies, and of the programs that are required in order to achieve the objectives. This research aims to ascertain whether employees have an understanding of their respective organization's strategies, and whether the opportunities that they recommend are aligned to those strategies.

2.5 RESEARCH QUESTIONS

The research questions posed by this study are:

1. Do employees exhibit opportunity recognition behaviours?

2. Are opportunity recognition motivators important for developing entrepreneurial culture?

3. Is there a positive relationship between opportunity recognition behaviours and the frequency at which opportunities are recognized? Are the opportunity recognition behaviours perceived by employees related to the frequency of opportunities recognised?

4. Does the frequency with which employees generate opportunities relate to:

    a) Employees' perceptions of opportunity recognition motivators;

    b) The success of implemented opportunities; and

    c) The interaction between opportunity recognition behaviours or motivators and the successful implementation of opportunities. Does success of implemented opportunities moderate the relation between frequency of opportunities recognised and perceptions of behaviours and motivators?

As discussed, the hypothesized moderating effect of success on the frequency of generating opportunities will be tested using hierarchical regression. The study further attempts to investigate whether those employees who generate more successfully implemented opportunities also tend to generate a larger number of opportunities (frequency of opportunity recognition). But in the case of less successful employees in terms of generating opportunities, opportunity recognition behaviours and motivators are expected to be unrelated, or at best loosely correlated, to frequency of opportunity generation.

2.5.1 Hypotheses

The following Hypotheses are formulated and will be tested at the 0.05 level of significance:

1. H_0: Employees perceive that opportunity recognition behaviours do not play a meaningful role in identifying opportunities in their corporate environments.

   H_A: Employees do perceive that opportunity recognition behaviours play a meaningful role in identifying opportunities in their corporate environments.

2. H_0: Employees perceive that opportunity recognition motivators do not play a meaningful role in identifying opportunities in their corporate environments.

   H_A: Employees do perceive that opportunity recognition motivators play a meaningful role in identifying opportunities in their corporate environments.

3. H_0: Employees who propose a greater number of opportunities perceive that opportunity recognition behaviours are of the same importance as perceived by employees who propose fewer opportunities. (**OR** Employees' perceived importance of opportunity recognition behaviours is the same irrespective of the number of opportunities they generate.)

   H_A: Employees who propose a greater number of opportunities do perceive that opportunity recognition behaviours are of more importance than employees who propose fewer opportunities.

4. H_0: Employees who propose many successful opportunities perceive that opportunity recognition motivators are of equal importance as perceived by employees who propose fewer successful opportunities (**OR** Employees' perceived importance of opportunity recognition motivators is the same irrespective of the success of the opportunities they generate.)

H_A: Opportunity recognition motivators will change depending on how many opportunities are successfully pursued. Employees who propose many successful opportunities do perceive opportunity recognition motivators are of more importance than employees who propose fewer successful opportunities.

5. H_0: Success will not moderate the relation between frequency and perceptions of behaviours and motivators of opportunity recognition.

   H_A: Success will moderate the relationship between frequency and perceptions of behaviours and motivators of opportunity recognition.

CHAPTER III

3 Research Methodology

This chapter describes the research methodology utilised to select the sample respondents, the research instrument and data gathering procedure, and the methods used to test the hypotheses and answer the research questions of this study. This research has been conducted by gathering quantitative and qualitative data from selected employees of existing corporate ventures and drawing the conclusions from the subsequent statistical analysis and data interpretation.

The research is a non-experimental cross-sectional study conducted under field conditions in which quantitative and qualitative data from respondents meeting pre-determined selection criteria was collected using a research questionnaire.

3.1 Common Method Bias

The research recognizes the potential impact of common method bias on the findings of this study. Common method bias refers to the degree to which correlations are altered (inflated) due to a methods effect (Meade, Watson and Kroustalis, 2007). It arises because of common method variance, which is the variance attributable to the measurement method used rather than to the constructs. Harman's single-factor test is believed to be a valid test for the research instrument employed in this research. This specific test is run to make sure that the observed relationships among the constructs are free from the common method bias. It is suggested that researchers should wherever possible use negatively worded items, randomized item order, and multiple methods and raters (Meade, Watson and Kroustalis, 2007). However the presence of common assessment methods hardly necessitates large and problematic common method bias. In many cases, common method bias may be trivially small and may not necessarily jeopardise the validity of study conclusions in every case (Meade, Watson and Kroustalis, 2007). In spite of the general recognition of the possibility of correlations being distorted due to the influence of a general bias, there have been few instances in which changes in

correlations after removal of bias have been reported (Biderman, Nguyen, Cunningham and Ghorbani, 2011).

In an additional effort to minimise common method bias a number of questions posed in the research questionnaire in annexure 1 were negatively worded (questions 20, 27 and 35).

3.2 Research Instrument for the Study

The chosen instrument of measurement for this research is a questionnaire. Questions that are included in the questionnaire have been formulated on the basis of prior studies documented in the literature review and particularly build upon the approach and questionnaire followed in the studies conducted by Urban (2009) and Hornsby, Kuratko and Zahra (2002). The research instrument used for this study benefits immensely from Urban (2009), as both attempt to examine the same motivations and behaviours except that this research focuses on employees whereas Urban (2009) studied serial entrepreneurs. The study of Hornsby et al (2002) examined middle managers perceptions of the internal environment for corporate entrepreneurship.

A number of the questions related to rewards/reinforcement and management support were drawn from Hornsby et al (2002). The majority of the questions relating to understanding customers needs, motivators and motivators for multiple opportunity recognition were based on the study by Urban (2009). This eases the burden of carrying out rigorous tests on instrument reliability and validity. Although scale reliability and validity are situation and sample specific, we still need to investigate these in present context. Thus, appropriate statistical tests have been run on the research instrument to assess instrument reliability and validity and identify those questionnaire items that might affect instrument reliability and validity and exclude them from the analysis; thereby from important conclusions.

Questions relating to biographic details were based on prior literature (GEM Report, 2009; Scmitt-Rodermund, 2004; and Venter, Urban and Rwigema, 2008). The

categories related to age, and educational levels conform to those measured and reported in the GEM Report (2009).

The classification of respondents by gender seems to involve academic debate and disagreement. Anyone who is involved with men and women entrepreneurs or managers should be careful not to categorize them according to traditional sex-role stereotypes (Fagenson, 1993). This is in contrast to the view that gender differences exist in both the pattern and the strength of factors that influence men's and women's career motivation and choices to engage in entrepreneurial activities (Farmer and Associates, 1997, in Lichtenstein, Carter, Dooley and Gartner, 2007).

Perceptual measures were chosen in the questionnaire since they have been widely used in previous research and because management perceptions are the preferred measure of corporate entrepreneurship (Antoncic and Hisrich, 2004).

The questionnaire utilised in this research attempts to follow the approach of Morris et al (2009) in that the questions have been formulated to ascertain the employees' perceptions of their behaviours and motivators regarding opportunity recognition, treatment of failed ventures, corporate strategy, managerial support and financial reward.

A number of the questions posed in the questionnaire aim to assess the motivations of employees in making entrepreneurial decisions. These questions attempt to follow the research directions suggested in the literature (Foo, Baron and Uy, 2009; Shane, Locke and Collins, 2003; Young, 2000; and Zahra, Korri and Yu, 2005).

The detailed questionnaire has been included as **Annexure 1.**

3.3 The Sample Frame

The sample frame of participating financial services firms was built using the JSE Handbook (2010), the FSB website with the list of approved financial services companies and asset managers and the SARB listing of South African Banks.

The Financial Sector Charter on Black Economic Empowerment as gazetted on the 9th February 2007 categorises financial sector firms according to the following

categories:

- Banking
- Insurance
- Brokerage Firms (including Financial Services Providers (FSP's) as regulated by the Financial Services Board)
- Asset Managers and Collective Investment Schemes

The sample members for this research have been drawn from these categories and include only qualifying firms in the sample frame.

Corporate participants were approached with a view to participation in the employee survey. These corporate participants were then asked to allow at least **15 of their employees** to participate in the completion of an on-line survey (aiming for at least n=150 of the total respondents to be contacted after allowing for the possibility of non response by participants). Although difficult to form a sample size of 5% of the population to meet the strict definition of statistical representativeness, the sample selection is done to make sure that members were drawn from the various regions and firms of different sizes in order to make reasonable and valuable conclusions.

3.4 Criteria for Selection of Sample Members

In order to be included in the sample, the company should be classified as a "financial sector" company, in that its principal business should be in one of the following areas:

- Banking,
- Asset Managers and Collective Investment Schemes,
- Insurance,
- Brokerage Firms (including Financial Services Providers (FSP's) as regulated by the Financial Services Board)

In addition, the company should have been in operation for at least five years. After five years of operation the company selected would be categorised as an established business in that it would have been in business longer than the 3 to 5 year cut-off utilised by the GEM Report (2009) in its classification of an established business. Based on the eligibility criteria and employing a non probability judgemental sampling technique, at least 15 respondent companies would be approached. An attempt was made to form a sample frame that is representative of the population as organized under the above business classifications.

Each respondent company selected using the above selection criteria was requested to put forth 15 employees to participate in the survey (with the ultimate objective of building a sample size of at least n=150 after allowing for a lack of response from a number of participants). A total of 23 employers participated in the study and a total of 325 questionnaires were sent to individual employees of these participating companies.

A single contact person within the company was established, with this person furnishing the e-mail details of the participants from the company in order for the questionnaire to be sent directly to each individual. The contact person was followed up on a weekly basis with the details of those employees who had not yet completed the questionnaire.

A number of employees were reported who could not open the questionnaire link as a result of their employers' firewall protocols.

These employees were then sent a questionnaire to fill in manually and return. The details contained in these manually completed questionnaires were then uploaded into the data. A total of 195 respondents completed the survey (either electronically or manually).

The total response rate achieved as a result of the interventions and process detailed above was 60%.

An initial analysis of the data revealed that 7 respondents had not completed 5 or

more questions, and those respondents were then eliminated from the detailed data analysis (leaving n=187). In addition 9 respondents had not completed between 1 and 4 questions. In order to resolve the missing data for these 9 respondents, the average response from that particular respondent company for the particular question was substituted for the missing response.

The complete survey questionnaire is included in **Appendix 1**. The survey was conducted online and results captured through a remote online system provided by SurveyMonkey (see www.surveymonkey.com). To the extent that the on-line survey was not possible with a selected company, questionnaires were delivered to the company and completed questionnaires were collected. Follow up phone calls were necessary for those employees who had received the questionnaire but had not completed it timeously.

3.5 The Measures

The questionnaire begins with certain biographic details, and is then broken down into the following sections:

- Frequency of opportunity recognition
- Opportunity recognition behaviours
- Opportunity recognition motivators
- Alignment of opportunity recognition behaviours to corporate strategy (These questions have been posed to understand whether the opportunities recognised by employees are in alignment with the strategy of their respective companies.)

Metric (i.e. interval and ratio scaled) data are measured on a 1-7 Likert scale, where 1=strongly agree to 7=strongly disagree. I am aware of the current academic debate and research around the treatment of Likert data. The Likert-type data is therefore treated from both an ordinal and interval scale approach and accordingly performed dual analyses prior to conclusions being drawn.

The use of the Likert scale was decided upon after reviewing alternative measurement scales in academic literature. The simplicity and ease of use of the Likert scale is its real strength (Neuman, 2000). Company employees are asked to complete many questionnaires from time to time, the ease of interface and usability of the utilised measurement scale is an important aspect one has to consider. A seven point Likert scale was decided upon because firstly an odd number needed to be chosen in order to allow for the scale to be evenly balanced to retain a continuum of positive and negative statements, and secondly reliability tends to level off at about 7, and after 11 steps there is little gain in reliability from increasing the number of steps (Nunally, 1978, in Neuman, 2000). It is also argued that a 5- or 7- point scale may produce slightly higher mean scores relative to the highest possible attainable score, compared to those produced from a 10-point scale (Dawes, 2008). The other important benefit of using a 7-point scale over a five-point scale is that it is best to use as wide a scale as possible since we can always collapse the responses into condensed categories later on for analysis purposes.

The questionnaire length and anonymity of employee's responses were considered in the questionnaire design in order to generate maximum response rate.

3.6 Data Analysis

3.6.1 Factor Analysis

A factor analysis has been run on the behaviour and motivator item responses in order to test for the underlying dimensionality of the data (i.e. to test the construct validity of the scale by assessing its convergent and discriminant validity). Convergent validity was assessed by examining whether the items designed to measure behaviour loaded highly on a single factor and similarly those items designed to measure motivators loaded highly on a single factor. Discriminant validity was assessed by testing whether the two sets of items loaded highly on different factors.

3.6.2 ANOVA Tests

ANOVA is a statistical technique for comparing means for multiple independent populations (Cooper and Schindler, 2008). Group means are estimated and the magnitude of variation is assessed.

ANOVA test is run with an analysis of both p-values and F-values to test for differences between means as specified by the hypotheses. ANOVA will be used to compare the mean perceptions of opportunity recognition behaviours and opportunity recognition motivators.

The relevant elements of each model construct are evaluated individually with category frequencies and item means determined. The data collected from the Likert-type scale was first interpreted as categorical ordered data, followed by parametric analyses of means. In this way, the data obtained from the Likert scale will be interpreted as both ordinal data and interval scales, and thus addressing the differences between ordinal and equal interval levels in the Likert scale (Gob, McCollin and Ramalhoto, 2007).

3.6.3 Regression Analysis

Regression analysis has been conducted on the data in order to test the moderation effect of success on the relationship between frequency and perceptions of behaviours and motivators. The independent variable (perceptions of behaviours and motivators) has been centred with reference to the means. The dependent variable is frequency of opportunity recognition with the moderator being success. The strength of the interaction variable has been assessed by hierarchical regression with an analysis of the significance of R-square. The basic regression model without the interaction effect as well as that with the interaction effect has been reported and compared.

$$Freq_{opportunity_recognition} = \alpha + \beta(Percep_{Motivators}) + \delta(Percep_{Behaviours}) \quad \text{..... (1)}$$

R-square from the above regression has been compared with the R-square to be obtained from the following regression:

$$Freq_{Opportunity_recognition} = \propto + \beta(Percep_{Motivators}) + \delta(Percep_{Behaviors}) + \gamma(Success) \quad \text{.....(2)}$$

If the R-square from equation (2) is higher than the one from equation (1) and γ is positive and statistically significant, then one can conclude that success moderates the impact of perceptions on entrepreneurial opportunity recognition.

The research has only used primary data. The primary data source was extracted from respondents' questionnaire.

3.7 Reliability and Validity

3.7.1 External validity

External validity has to do with whether the results of a behavioural study would hold for other persons, settings, times or places (Calder, Phillips and Tybout, 1983).

The ability to generalise these research findings across the population is limited due to the small sample size and the convenience sample methodology utilised.

3.7.2 Internal and Construct validity

Internal validity examines the extent to which the results of the survey measure what we intended to measure (Cooper and Schindler, 2008). In this research internal validity is the extent to which the findings of the research can be attributed to the factors considered in the study.

Construct validity involves the extent to which the questions which make up a construct actually measures what it intends to measure. An intuitive approach has been used in the drafting of questionnaire questions. A consistency matrix was prepared and questionnaire questions were related to the relevant research questions.

The questionnaire questions attempt to follow academic literature and the responses should therefore conform to academic reasoning. The data was scaled before subjecting it to statistical analysis. In addition a Factor analysis was conducted on

the data in order to examine construct validity. Factor analysis investigates whether a number of variables are linearly related to a smaller number of unobservable factors (Cooper and Schindler, 2008).

3.7.3 Reliability

Reliability tests look to examine the accuracy and precision of the measurement procedure (Cooper and Schindler, 2008).

The consistence on the measurement scale was adopted to examine reliability. The data was assessed to ascertain the degree to which it is free of random or unstable errors. The data was scrutinised in order to support internal consistency.

Cronbach's Alpha was calculated on each subscale to examine construct validity, in order to measure the degree to which instrument items are homogenous and reflect the same underlying constructs (Cooper and Schindler, 2008).

3.8 Limitations of the study

The study contributes to the existing literature by theorizing, and empirically evaluating, the perceptions of employees of their opportunity recognition behaviours and motivators within their respective corporate environments. This study is subject to some limitations that may reduce the strength of the results:

The sample was selected on a convenience basis and as such the sample may not be representative of the population. Selection can bias statistical inference about empirical relationships between a chosen variable and an outcome variable (Kalnins, 2007).

The results of the study may be subject to Systematic bias in that there may be differences between the results from the sample and the theoretical results from the entire population. The results are therefore limited in terms of inference and generalisation in terms of the population.

The questionnaire has been based on self assessment of behaviours and motivators and as such may not reflect true behaviours of the employees concerned. Employee

self assessment may not reflect reality and as a result caution may have to be exercised in the interpretation of the results.

The relatively small sample size may result in biases and as a result caution would have to be exercised in the interpretation of the results. The results are therefore limited in terms of inference and generalisation in terms of the population.

As different sets of respondents were selected from the 23 companies, the research design may be considered as hierarchical with respondents nested within companies.

As responses of respondents from the same companies may be more similar than responses of respondents from different companies, there may be a lack of independence in the respondents of the data set thereby contravening an assumption and requirement of the parametric tests used in the analyses that the observations are independent. However, as the responses were anonymous, the appropriate statistical analysis used could not be applied to control for the (random) nested effect, and thus the results of the analysis may not be entirely accurate.

CHAPTER IV

4 Analysis and Discussion

4.1 Introduction

This chapter seeks to present the findings and results obtained from the research undertaken. The data was analysed and the results reported in accordance with the detailed research methodology chapter of this document.

This chapter will start with a description of the sample and details surrounding the preliminary examination and subsequent clean-up of the data prior to analysis.

An analysis of the demographics of the respondents with a discussion of some key observations will follow.

An analysis of the internal consistency and reliability was conducted on the data with appropriate tables displaying the resultant analyses and a discussion around the appropriate action that needed to be taken.

Each research hypothesis is then described with a discussion describing the appropriate data analysis required to prove each hypothesis. The decision to accept or reject each of the hypotheses is made using a 95% confidence interval. The study attempts to shed light on the possible reasons in the event where findings contradict theories or widely held opinions about supposed relationships.

Data tables and figures will be presented for descriptive analysis purpose or to graphically evaluate potential relationships between variables of interest.

Additional analysis is then conducted in order to better understand why groups of respondents (clusters), perceive differing opportunity recognition behaviours and motivators, with key findings discussed. Key tables and figures related to the additional analysis are presented where appropriate.

4.2 The Sample

The sample was selected on a convenience basis as per the criteria laid out in Chapter 3. A total of 23 employers participated in the study and a total of 325 questionnaires were sent to individual employees of these participating companies.

A single contact person within each company was established. The person is responsible for furnishing the e-mail details of all participants from his company and for ensuring that each participating individual fills out the questionnaire on time. The contact person was followed up on a weekly basis and supplied with the details of those employees who had not yet completed the questionnaire. It was noted that a number of employees were unable to open the questionnaire link as a result of their employers' firewall protocols. These employees were then sent a questionnaire in order to fill in manually and return the questionnaire. The details contained in these manually completed questionnaires were then uploaded on to the database.

A total of 195 respondents completed the survey (either electronically or manually). It is managed to achieve a total response rate of 60% as a result of the interventions and process detailed above.

An initial analysis of the data revealed that 7 respondents had not completed 5 or more questions, and those respondents were then eliminated from the detailed data analysis (leaving n=187). In addition 9 respondents had not completed between 1 and 4 questions. In order to resolve the missing data for these 9 respondents, the average response from that particular respondent company for the particular question was substituted for the missing response.

4.3 Demographic Analysis

The demographic nature of the sample responses are analysed and the descriptive statistics are reported below:

The majority (62%) of respondents were male, with 40% of the respondents aged between 26 and 35. Almost three quarters (72%) of the respondents are aged between 26 and 45 years. Half of the respondents have a post graduate degree, with 83% of respondents having completed at least an undergraduate degree (Figure 15).

Almost two-thirds (65%) of the respondents have spent in excess of 10 years in their current careers with half (51%)total respondents having been employed by their current employer in excess of four years (Figure 11).

Three quarters (74%) of the participating companies employ in excess of 200 employees. A total of 23 companies participated in the survey with almost a third (31%) of them were drawn from the banking sector, 25% from asset managers, 25% from the Insurance sector, and 18% were drawn from brokerage firms (Figure 9).

These descriptive statistics are represented in the stacked bar graph in Figure 9.

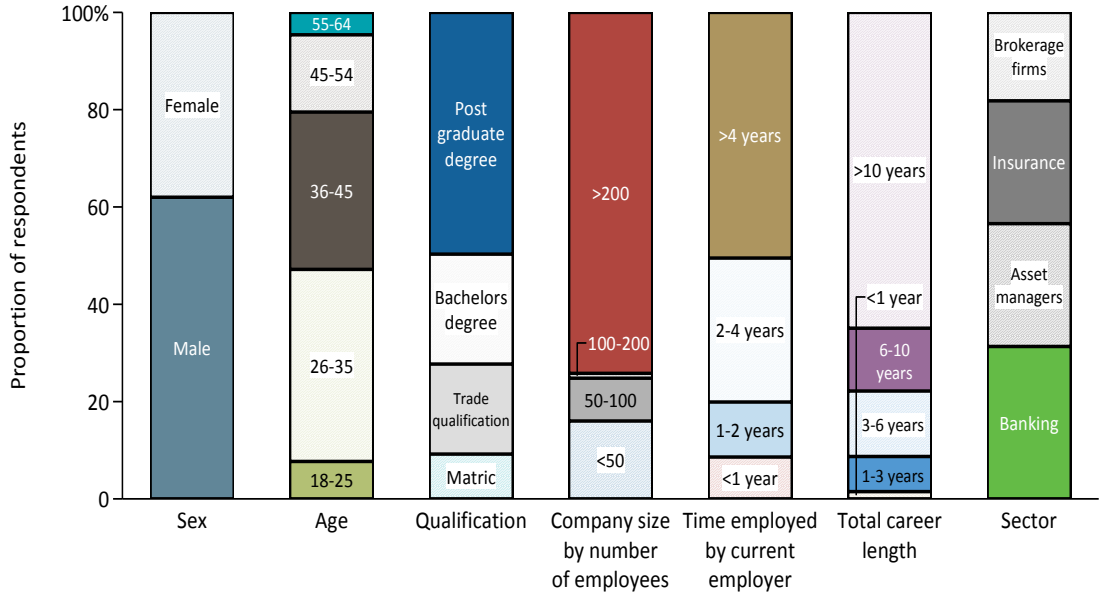

Figure 9: Combined Respondent Demographics

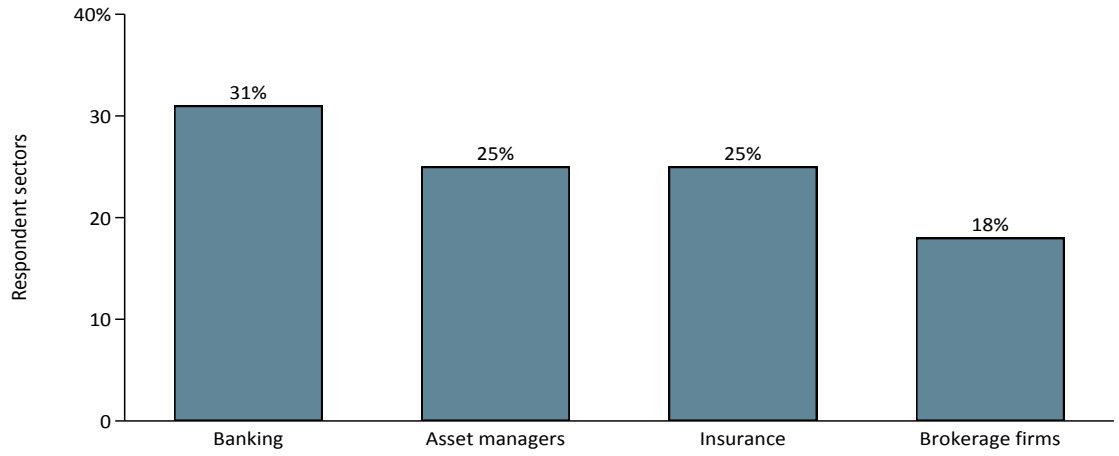

Figure 10: Breakdown of Respondent Financial Sector Companies

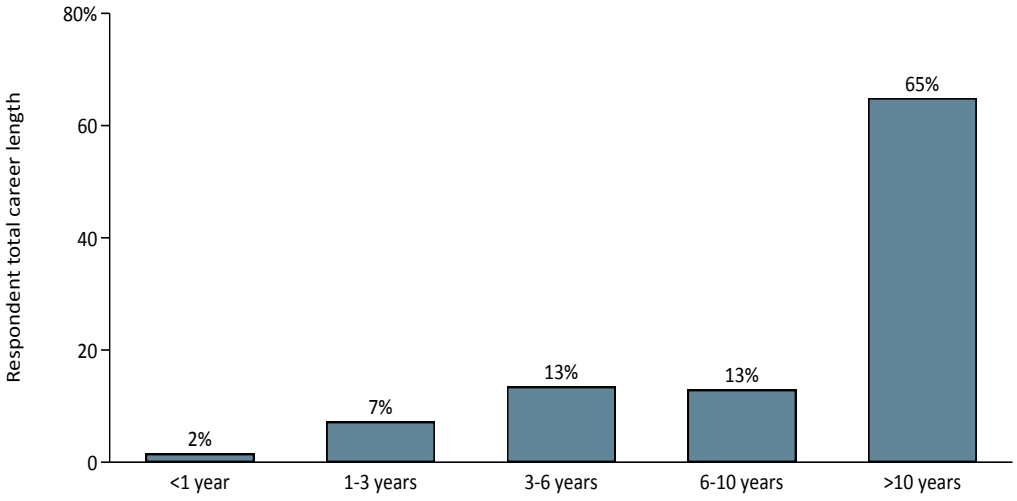

Figure 11: Total career Length

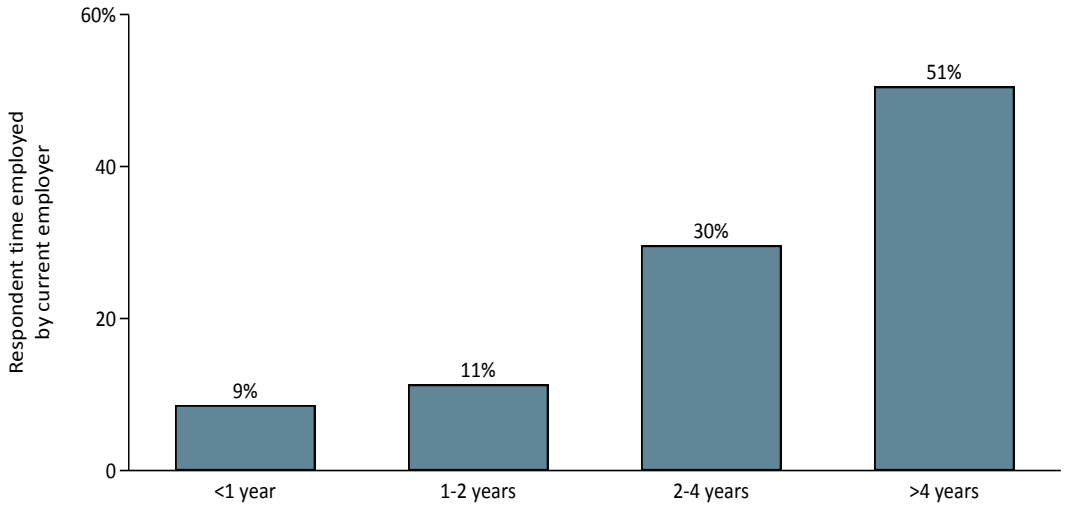

Figure 12: Time employed by current employer

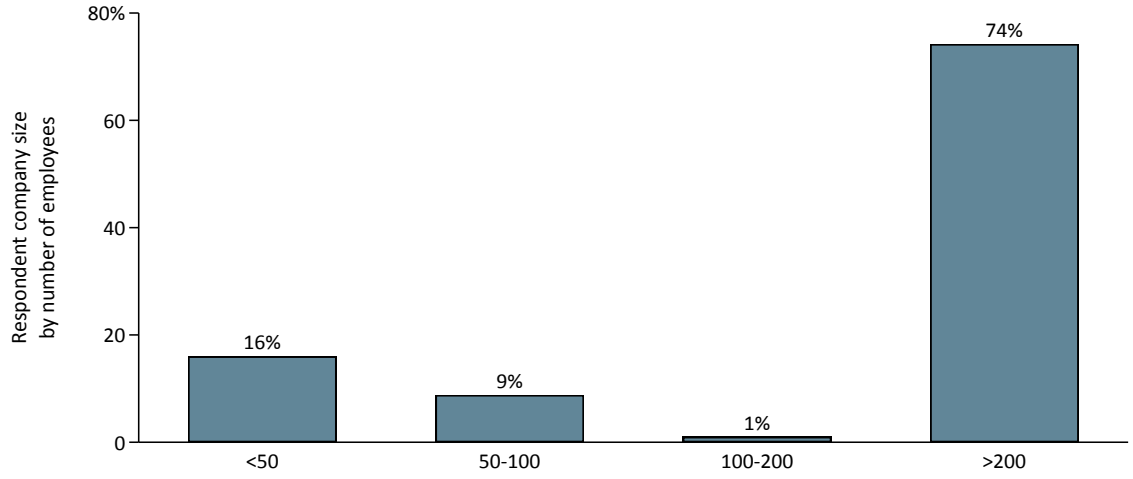

Figure 13: Company size by number of employees

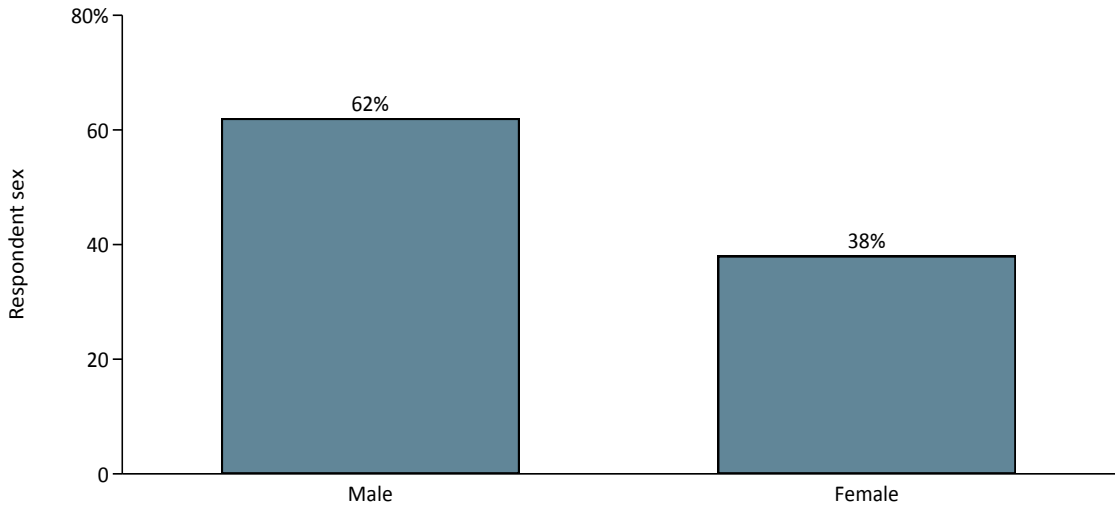

Figure 14: Sex of respondents

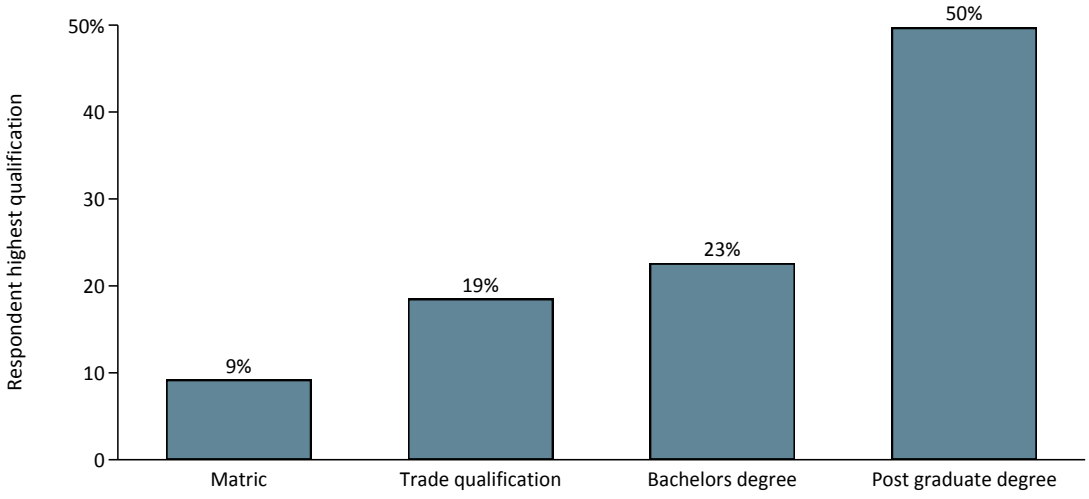

Figure 15: Education levels of respondents

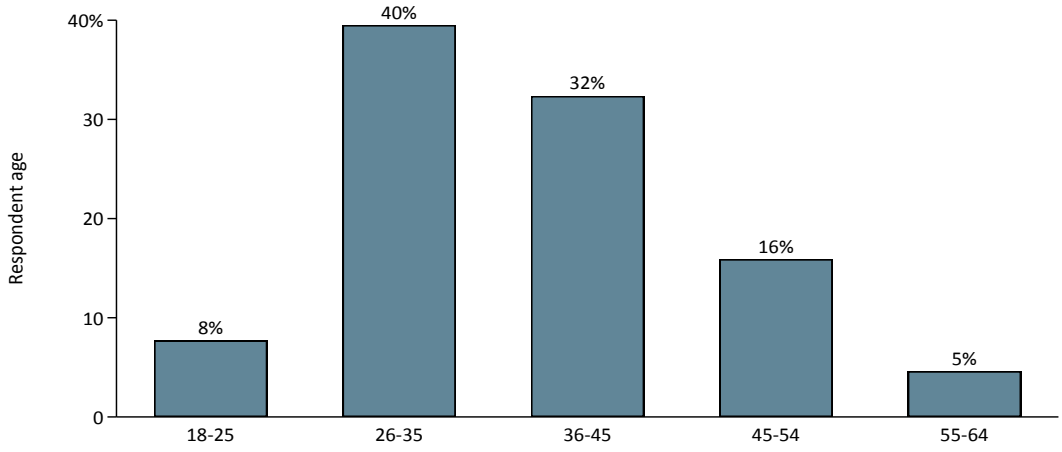

Figure 16: Age of Respondents

4.4 Internal Consistency Reliability of scales

Questions 13 to 21 (see **Annexure 1**) were formulated to measure perceptions of employees of their opportunity recognition behaviours. However, before the data could be analysed, the responses to question 20 (“I rely on others to identify opportunities for the company”), had to be reversed as the question was reverse scaled.

Questions 22 to 31 (see **Annexure 1**) were formulated to measure perceptions of employees of the roles of motivators for opportunity identification. However before the data could be analysed, the responses to question 27 (“The management will cast a blame on me for recommending an opportunity that turned out to be unsuccessful”), had to be reversed as the question was reverse scaled.

Questions 32 to 36 (see **Annexure 1**) were formulated to measure perceptions of employees about strategy alignment to opportunities identified. However before the data could be analysed, the results of question 35 (“I will promote a business opportunity even if it does not fit into my company’s current strategy”), had to be reversed as the question was reverse scaled.

The Cronbach's Alpha coefficient and inter-item correlations of the constructs are detailed in Table 1 below:

Table 1: Cronbachs Alpha and inter item correlation of the constructs

Construct	Cronbach's Coefficient Alpha	Average Inter- Item Correlation
Opportunity Recognition Behaviours	0,83	0,38
Opportunity Recognition Motivators (With Q27)	0,69	0,21
Opportunity Recognition Motivators (Without Q27)	0,72	0,25
Alignment to Company Strategy	0,53	0,23

A Cronbach's Alpha coefficient in excess of .70 is a sufficiently strong measure of internal consistency (Cooper and Schindler, 2008). The opportunity recognition behaviours scale has a calculated Cronbachs Alpha of 0.83, which is substantially higher than .70 signalling a strong level of internal consistency.

The opportunity recognition motivators scale shows a calculated Cronbachs Alpha coefficient of 0,69, which is marginally lower than 0,70. Further analysis of the results reveals that question 27 has a very low inter-item correlation of 0.048. This reveals that the respondent's answers to question 27 are only weakly, if at all, correlated with the responses to the rest of the questions in the series from question 22 to 31 (opportunity recognition motivators). Once the results for question 27 are removed from the analysis, the calculated Cronbachs Alpha increases to 0,72 indicating a sufficiently strong level of internal consistency. It is therefore decided to eliminate question 27 ("The management will cast a blame on me for recommending an opportunity that turned out to be unsuccessful"), from any analysis conducted to answer the various research questions posed earlier in the document.

Alignment to company strategy shows a calculated Cronbachs Alpha of 0,53, which is substantially lower than the accepted level of .70. As Cronbach's Alpha coefficient is dependent not only on the level of the correlations among items but also on the number of items in the scale, the lower reliability of this scale may partly be explained by its shorter length as this scale is composed of 5 questions compared to the number of questions asked for opportunity recognition behaviours (9 questions) and opportunity recognition motivators (10 questions). However, the average inter-item correlation of this scale is also low at 0,23 relative to the desired lower limit of 0.30. Furthermore, an examination of resultant Cronbach's Alpha with the addition of 4 additional parallel items is estimated at 0,67 still lower than the accepted lower limit of 0.70. The finding of 0.67, though still low in comparison to 0,70, may be sufficiently strong to conduct academic analysis. According to Schmitt (1996), satisfactory levels of alpha depend on test use and interpretation and state that even relatively low (e.g. 0,50) levels of criterion do not seriously attenuate validity coefficients. It is worth noting that the results of the alignment to company strategy questions have not been used to answer any of the research hypotheses posed in chapter 3. They are used to add further depth to the analysis and interpretation of the data.

It should also be noted that the author has not confused low reliability with lack of uni-dimensionality. The finding that test length is related to reliability may cause significant misinterpretations of measures when alpha is used as evidence that a measure is uni-dimensional (Schmitt, 1996). The construct validity of this scale has not been evaluated via Cronbach's Alpha coefficient of internal consistency reliability.

4.5 Statistical Test Results

Descriptive statistics of the questions included in the questionnaire are contained in Table 3 below.

Table 2: Individual Questions with Means and Standard Deviations

Research Questions	Mean	Standard Deviation	Reverse Scaled
OPPORTUNITY RECOGNITION BEHAVIOURS	**2.56**	**1.29**	**5.44**
Q13) I understand the needs of our customers.	2.15	1.07	5.85
Q14) I propose opportunities for my company that meet customer needs.	2.47	1.35	5.53
Q15) I am able to identify an opportunity more quickly than others.	2.79	1.29	5.21
Q16) I realize new opportunities are important for the development of my company.	1.56	1.00	6.44
Q17) I use a step-by-step process as opposed to a one-time event in order to identify opportunities.	3.05	1.46	4.95
Q18) I am creative in identifying opportunities.	2.78	1.35	5.22
Q19) I draw on experience I have gained in my working career in order to identify opportunities.	2.16	1.32	5.84
RQ20) I rely on others to identify opportunities for the company.	4.15	1.71	3.85
Q21) Brainstorming ideas in a team environment produces opportunities.	1.96	1.10	6.04
OPPORTUNITY RECOGNITION MOTIVATORS	**2.74**	**1.52**	**5.26**
Q22) If I recommend a successful opportunity, I will be rewarded financially.	3.83	1.92	4.17
Q23) If I recommend a successful opportunity, I would like to see senior management's recognition of my involvement.	2.06	1.39	5.94
Q24) If I recommend a successful opportunity, I would like to take charge of managing the venture.	2.68	1.40	5.32
Q25) Rules, procedures and bureaucracy hinder the implementation of ideas.	3.17	1.77	4.83
Q26) I enjoy the challenge of assisting my company to grow and succeed.	1.69	0.99	6.31
RQ27) The management will cast a blame on me for recommending an opportunity that turned out to be unsuccessful.	3.15	1.70	4.85
Q28) The company understands that we will all learn as much from opportunities that fail as from those that are successful.	2.97	1.48	5.03
Q29) I am motivated to identify a continual stream of new opportunities in order for my company to grow and succeed.	2.71	1.40	5.29
Q30) Financial reward by the company is important for me in order to remain motivated to continue providing the company with new opportunities.	2.69	1.71	5.31
Q31) My company needs to recognise my involvement in successful opportunities in order to motivate me to identify further opportunities.	2.41	1.44	5.59
ALIGNMENT TO COMPANY STRATEGY	**2.93**	**1.45**	**5.07**
Q32) My company's strategy is clear to me.	2.24	1.23	5.76
Q33) I aim to identify opportunities that are aligned to my company strategy.	2.34	1.18	5.66
Q34) The promotion of opportunity identification is an important part of my company's strategy.	2.68	1.49	5.32
RQ35) I will promote a business opportunity even if it does not fit into my company's current strategy.	4.47	1.69	3.53
Q36) When I brainstorm ideas with work colleagues we only discuss ideas that fit the company's current strategy.	3.84	1.68	4.16

The questions contained in the questionnaire (**Annexure 1**) were asked on the basis of a 7 point Likert-type scale whereby 1= Strongly Agree and 7= Strongly Disagree. In order to allow for a more logical and intuitive interpretation of the results, the answers to the Likert-type scale questions have been reversed prior to analysis.

Questions 20 and 35 were reverse scaled in the questionnaire and an analysis of these reverse scaled responses reveals that the means of the responses (3,85 and 3,53) are below the Likert scale midpoint of 4 and are below the mean of the responses for the other questions in their particular constructs (opportunity recognition motivators and alignment to company strategy"). This may suggest an acquiescent response set whereby the respondents have responded in a particular fashion. This means that respondents in this context may simply have ticked the relevant answer without properly reading the question.

An analysis of the individual items reflecting the particular construct reveals the following:

- **Opportunity recognition behaviours** - Apart from the results of reverse scaled question 20, the means of all questions are all higher than the Likert scale midpoint of 4, the lowest being the mean responses for question 17 at 4,95 and the highest being the mean responses for question 21 at 6,04.
- **Opportunity recognition motivators** - The means of responses to all questions are all higher than the Likert scale midpoint of 4, with the lowest being the mean of responses to question 22 at 4,17, and the highest being the mean of responses to question 26 at 6,31.
- **Alignment to company strategy** - Apart from the results of the reverse scaled question 35, the mean of all responses are higher than the Likert scale midpoint of 4, with the lowest being the mean of responses to question 36 at 4,14 and the strongest being the mean of the responses to question 32 at 5,76.

4.5.1 Hypothesis 1

Hypothesis 1 posits that employees perceive that opportunity recognition behaviours play a meaningful role in identifying opportunities in their corporate environments.

In order to provide an intuitive explanation of the means of the questionnaire questions 13 to 21, a test of the means against a reference constant value of the midpoint of the Likert scale of 4 was conducted and the results are listed in Table 3 below:

Table 3: Construct Questions with Means and Standard Deviations

Construct	mean	Std. Deviation	N	t-value	Significance	95% Confidence Interval	
						Lower limit	Upper limit
R Opportunity Recognition Behaviours	5,44	0,86	187	23,0137	p<0.001	5,32	5,56
R Opportunity Recognition Motivators	5,31	0,85	187	21,0726	p<0.001	5.19	5.43

The mean of question 13 to 21 (opportunity recognition behaviours) was calculated as 5,44. A mean in excess of 4 would show that employees on average do perceive that opportunity recognition behaviours play a meaningful role in identifying opportunities in their corporate environments. The calculated mean of 5,44 is in excess of 4 and an analysis of the range of results given a 95% confidence shows a lower limit of 5.32 which is also in excess of 4. A single sample t-test was run and the significance of the t-test result was interpreted as a significant positive response to opportunity recognition behaviours, $\tau(187) = 23{,}01,\ p \leq 0{,}001$.

The result is therefore significant and we can therefore reject the null hypothesis 1 in favour of the alternative hypothesis.

The alternative Hypothesis is therefore described as follows:

Employees do perceive that opportunity recognition behaviours play a meaningful role in identifying opportunities in their corporate environments.

4.5.2 Hypothesis 2

Hypothesis 2 posits that employees perceive that opportunity recognition motivators play a meaningful role in identifying opportunities in their corporate environments.

After excluding the results of question 27 (as per the Cronbachs Alpha analysis), the mean of question 22 to 31 was calculated as 5,31. A mean in excess of 4 would show that employees do perceive that opportunity recognition motivators play a meaningful role in identifying opportunities in their corporate environments. The calculated mean of 5,31 is in excess of 4 and an analysis of the range of results given a 95% confidence shows a lower limit of 5,19 which is also in excess of 4. A single sample t-test was run and the significance of the t-test result was interpreted as a significant positive response to opportunity recognition motivators, $\tau(187) = 21{,}08\ p < 0{,}001$.

The result is therefore significant and we can therefore reject null hypothesis 2 in favour of the alternative hypothesis.

The alternative hypothesis is therefore described as follows:

Employees do perceive that opportunity recognition motivators play a meaningful role in identifying opportunities in their corporate environments.

4.5.3 Hypothesis 3

Hypothesis 3 postulates a relationship between the frequency of opportunity recognition and perceptions of opportunity recognition behaviours.

In order to analyse the data appropriately, the answers obtained from questions 9 to 12 which relate to the frequency and success of opportunity recognition needs to be re-coded. Questions 9 to 12 were collected on interval scale whereas the bulk of the questions are measured on ordinal scale. In order to change the measurements that have been taken on interval scale, an ordinal scale between 1 (None) and 5 (High) is created. The five measurements 0, 1, 2-4, 5-10, and over 10 number of opportunities are assigned 1, 2, 3, 4 and 5, respectively.

The data was analysed by comparing the **Opportunity recognition behaviours Mean** scores of respondents according to their according to the frequency of their opportunity recognition - the results are displayed in Table 4 below:

Table 4: Comparison of opportunity recognition behaviour means by frequency of opportunity recognition

Breakdown Table of Descriptive Statistics N=187					
Q9) How many opportunities have you identified for your current company?	**R Opportunity recognition behaviours - Means**	**Confidence - -95.000%**	**Confidence - +95.000%**	**R Opportunity recognition behaviours - N**	**R Opportunity recognition behaviours - Std. Dev.**
none	4.83	4.52	5.13	40	0.96
very low	5.50	5.27	5.72	60	0.87
low	5.52	5.12	5.91	12	0.62
medium	5.67	5.40	5.93	34	0.77
high	5.73	5.57	5.90	41	0.52
All Groups	5.44	5.32	5.56	187	0.86

An examination of the significance of the results using a one-way ANOVA F-test reveals that the **Opportunity recognition behaviours - Means** are statistically different across the opportunity recognition frequency categories, with F (4,182) = 8,1156 and $p < 0{,}05$.

A Scheffe post hoc analysis was conducted on the data and the results are presented in table 5 below:

Table 5: Scheffe Post Hoc Analysis - Opportunity Recognition Behaviours

Scheffe Test; Variable: R Opportunity recognition behaviours Marked differences are significant at p < .05000					
	{1} - M=4.83	**{2} - M=5.50**	**{3} - M=5.52**	**{4} - M=5.67**	**{5} - M=5.73**
none {1}		0.0026	0.1436	0.0006	0.0001
very low {2}	0.0026		1.0000	0.9135	0.7091
low {3}	0.1436	1.0000		0.9893	0.9531
medium {4}	0.0006	0.9135	0.9893		0.9978
high {5}	0.0001	0.7091	0.9531	0.9978	

The calculated means of the five categories are plotted against frequency of opportunity recognition as shown in Figure 17.

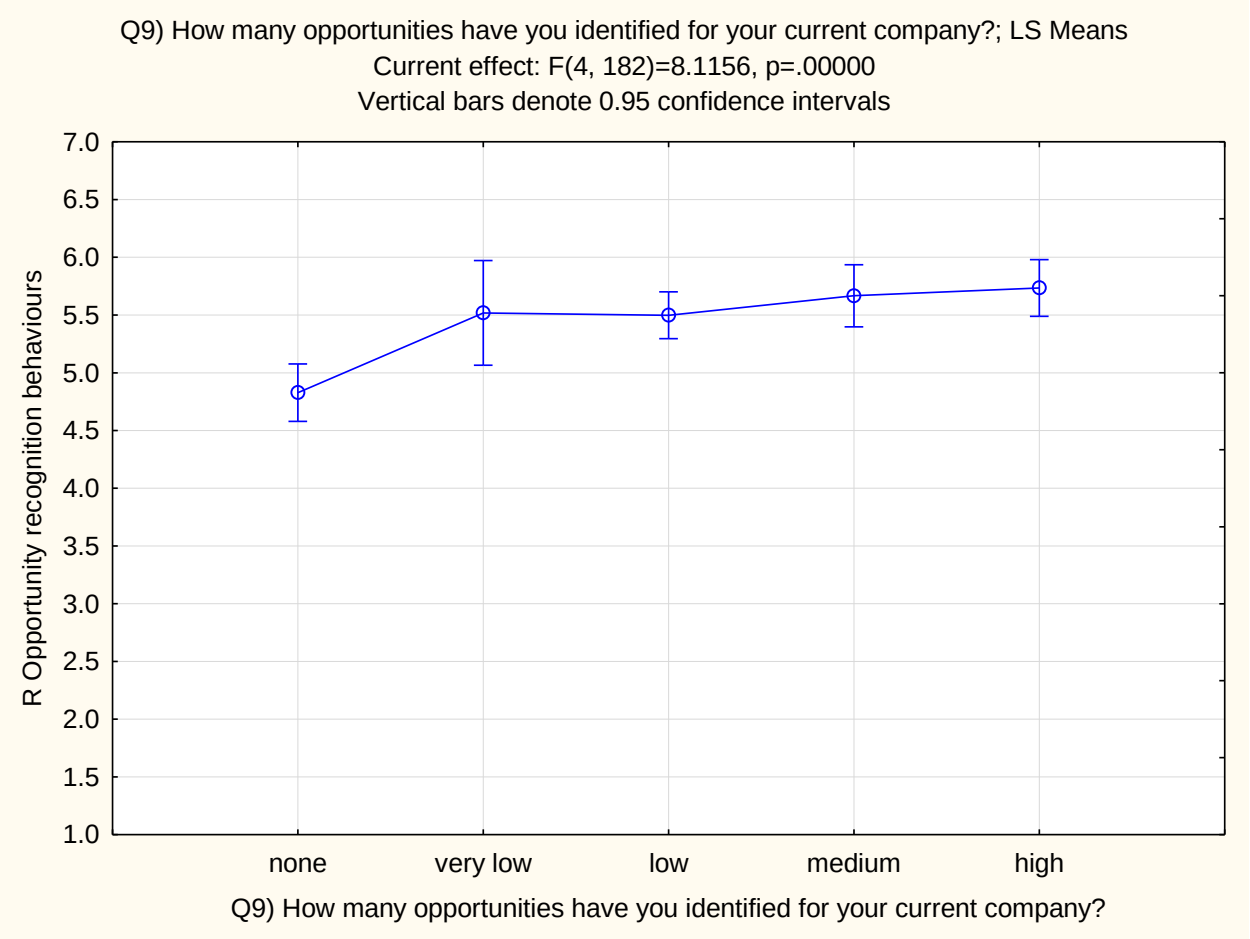

Figure 17: Opportunity recognition behaviours vs frequency of opportunity recognition

An examination of the Scheffe post hoc test presented in Table 5 reveals that although an analysis of the means of respondents ordered in categories from none to high (Figure 17) show a pattern of monotonic increase, the mean of respondents who identified no opportunities is not significantly different from the mean of those respondents who identified a low number of opportunities. However, the means of those respondents who identified a very low, medium and high number of opportunities are significantly higher than for those who identified none.

The null hypothesis can therefore be rejected in favour of the alternative hypothesis.

The alternative hypothesis is therefore described as follows:

Employees who propose a greater number of opportunities do perceive that opportunity recognition behaviours are of more importance than employees who propose fewer opportunities.

4.5.4 Hypothesis 4

Hypothesis 4 posits that the extent to which perceptions of opportunity recognition motivators change depends on how many opportunities are successfully pursued.

The data was analysed by comparing the **Mean** scores of respondents on opportunity recognition motivators by how many of their opportunities were successfully pursued - the results are displayed in Table 6 and plotted in Figure 18.

Table 6: Frequency and Means of recoded categories

Breakdown Table of Descriptive Statistics N=187			
Q10) How many of the opportunities that you identified for your current company have subsequently been successfully pursued by the company?	**R Opportunity recognition motivators - Means**	**R Opportunity recognition motivators - N**	**R Opportunity recognition motivators - Std. Dev.**
None (1)	5.22	65	0.80
Very low (2)	5.33	19	0.68
Low (3)	5.38	61	0.98
Medium (4)	5.53	20	0.66
High (5)	5.16	22	0.90
All Groups	5.31	187	0.85

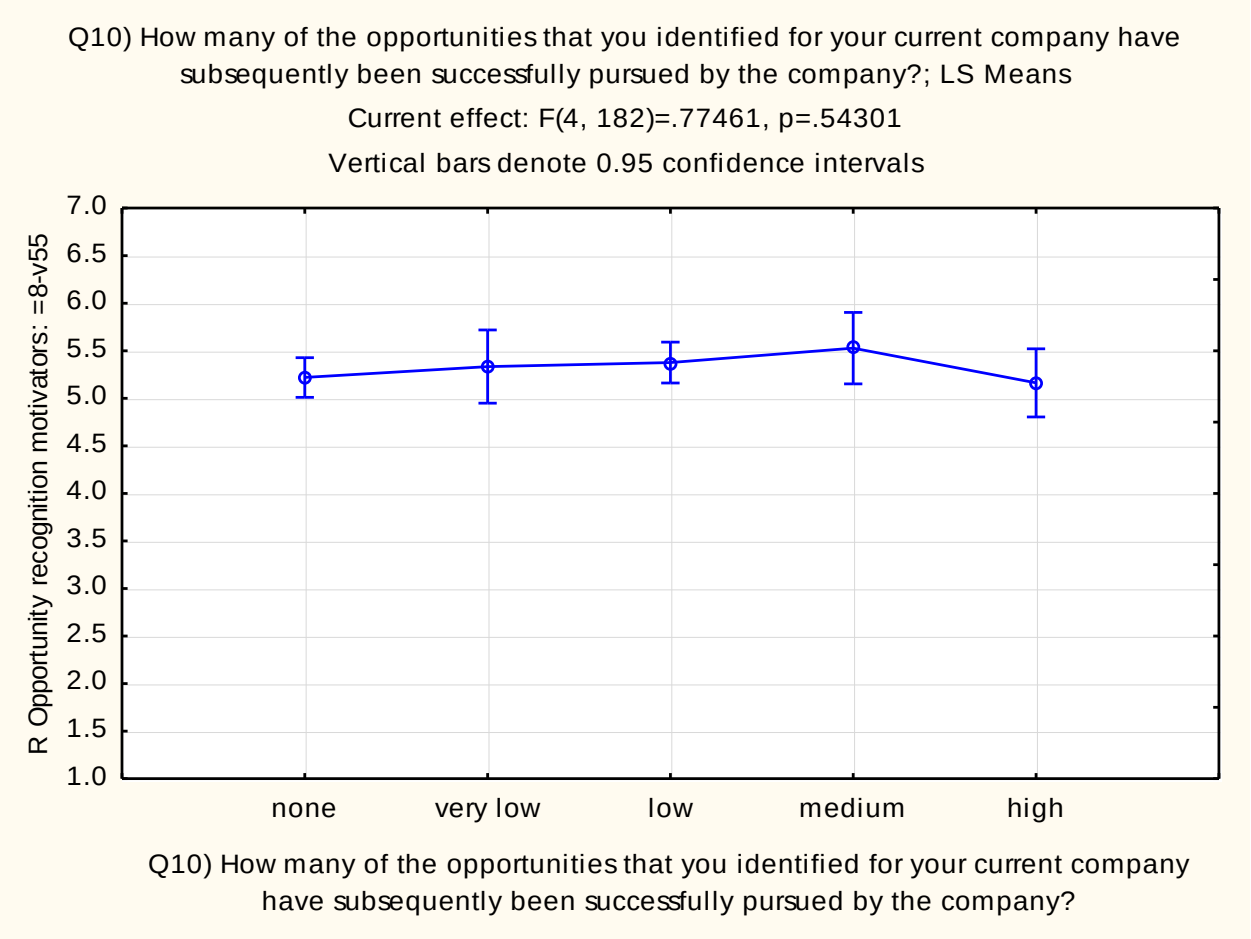

Figure 18: Opportunity Recognition Motivators vs Opportunities Successfully Pursued

An analysis of the significance of the results using an F-test reveals that the null hypothesis should not be rejected as evidenced by F(4,182) = 0,77461 and $p > 0{,}05$. There is therefore insufficient evidence to reject the null hypothesis in favour of the alternative.

The null hypothesis is therefore retained for further testing and described as follows:

Employees who propose many successful opportunities do not perceive that opportunity recognition motivators are of more importance than employees who propose fewer successful opportunities.

4.5.5 Hypothesis 5

Hypothesis 5 seeks to investigate the extent to which success moderates the relation between frequency of opportunity recognition and perceptions of behaviours and motivators of opportunity recognition.

This moderation analysis seeks to investigate the extent to which the moderator (success) affects the strength of the regression relation between frequency (dependent variable) and perceptions of behaviours and motivators (independent variables).

In order to analyse the proposed moderation effect most efficiently, the hypothesis is divided into two components, namely:

Hypothesis 5a: *Success moderates the relation between frequency of opportunity recognition and perceptions of opportunity recognition behaviours*.

Hypothesis 5b: *Success moderates the relation between frequency of opportunity recognition and perceptions of opportunity recognition motivators.*

The regression equation for evaluating moderation is:

$$Y = \alpha_i(ControlPredictors_i) + \beta(IndependentVariable) + \sigma(Moderator) + \theta(InteractionVariable)$$

In order to evaluate the moderation effect, a new interaction variable was created (the focal independent variable multiplied by the moderator variable). However in order to deal with the possibility of multicollinearity the independent variables were centred with reference to their averages.

The newly created interaction variable seeks to express the strength of the moderator effect of success.

4.5.5.1 Correlation Analysis

Table 7: Correlation matrix

	Frequency of opportunity (Q10)	Success (Q10)	Behaviours (Q13-Q21)	Motivators (Q22-Q31)	Motivators excluding Q27	Strategy alignment
Frequency of opportunity	1	0.837	-0.414	-0.098	-0.105	-0.137
Success	0.837	1	-0.266	-0.061	-0.079	-0.107
Behaviours	-0.414	-0.266	1	0.572	0.565	0.476
Motivators	-0.098	-0.061	0.572	1	0.976	0.436
Motivators excluding Q27	-0.105	-0.079	0.565	0.976	1	0.457
Strategy alignment	-0.137	-0.107	0.476	0.436	0.457	1

As shown in Table 7, correlation analysis is conducted among the different variables included in the regression analysis which follows.

4.5.5.2 Hypothesis 5a

The regression output of the base model (frequency of opportunity recognition vs perceptions of behaviours), plus the effect of the moderator (success) and the interaction variable (behaviour * success) is reflected in Table 8 below.

Table 8: Analysis of moderation effect of success on the relationship between frequency and opportunity recognition behaviours

	Base model			Including moderator		
	B	**SE**	**β**	**B**	**SE**	**β**
Intercept	3.2506***	0.0507	.00	3.3071***	0.0519	.00
Behaviours	0.3017***	0.0616	.19	0.2228***	0.0640	.14
Success	0.7882	0.0399	.78	0.7891***	0.7126	.78
Behaviours x success				-0.1760***	0.0509	-.14
R^2	.73			.75		
ΔR^2	-			.016***		
F	254.55***			183.81***		

B = unstandardised coefficients, SE = standard errors, β = standardised coefficients. N = 187. ***= *p<.01;*
**= *p<.05,* *= *p<.10.*

As seen in Table 8, the interaction term (Behaviours x Success) has an unstandardised slope of B = -0.176 and since the entire confidence interval (95%) lies above zero and since $P < .05$ in all instances, the results are statistically significant at the 5% level.

The ΔR^2 from the base model to the model including the moderator is .02 which shows an interaction effect. The interaction effect of the moderator has been plotted graphically and is represented in Figure 19 below.

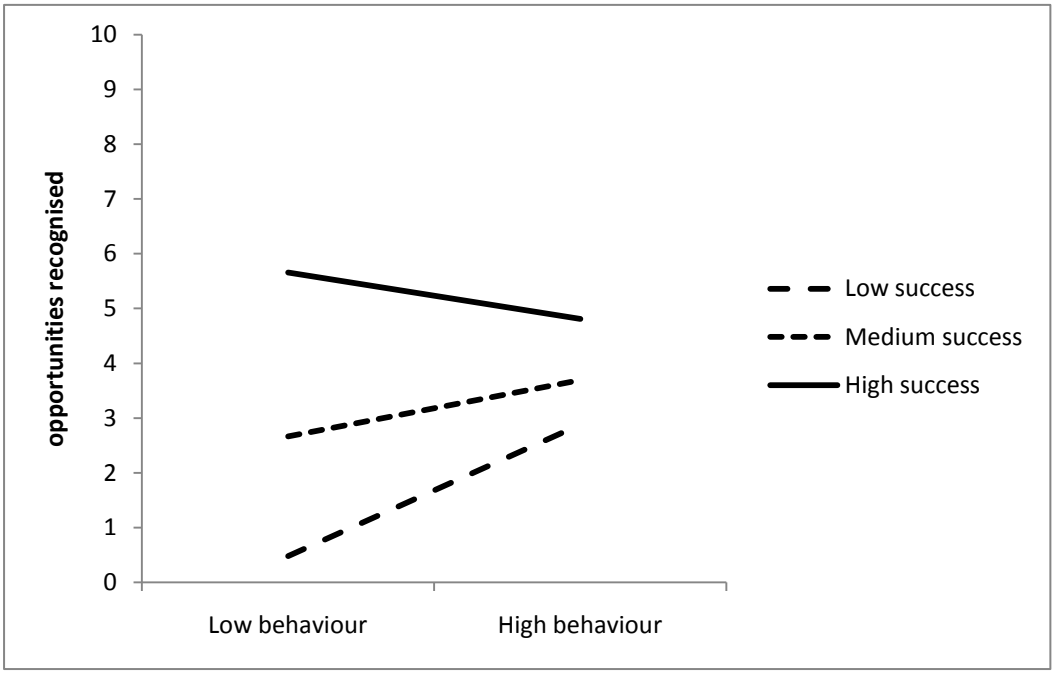

Figure 19: Interaction of Success on the Relationship between Frequency and Behaviour

An analysis of Figure 19 reveals the following:

- Respondents are likely to recognise a higher number of opportunities as more opportunities are successfully implemented.

- For those respondents who have a low or medium number of successfully implemented opportunities, the total number of opportunities recognised increases as their opportunity recognition behaviour increases.

- Those respondents who have a high number of successfully implemented opportunities tend to show a slight decrease (although this may not be significant) in the total number of opportunities identified as their opportunity recognition behaviour increases. This could be because those who have a high number of successfully implemented opportunities may become more discerning as they increase their level of opportunity recognition behaviours and only identify those opportunities with a higher chance of success. This seems to reinforce existing literature. Whereas novice entrepreneur's images of opportunity are based on newness and uniqueness, experienced entrepreneurs' images of opportunity are based on profitability and feasibility (Mitchell and Shepherd, 2010).

In the light of the analysis and detailed examination it does appear that success plays a moderating role in the regression relationship between frequency of opportunity recognition and perceptions of opportunity recognition behaviours.

We can therefore reject Null Hypothesis 1 in favour of the alternative Hypothesis.

The alternative Hypothesis is therefore described as follows:

***Success moderates the relationship between frequency of opportunity recognition and perceptions of opportunity recognition behaviours*.**

4.5.5.3 Hypothesis 5b

The regression output of the base model (frequency of opportunity recognition vs perceptions of motivators), plus the model with success as the moderator variable and the interaction variable (motivators * success) is reflected in Table 9 below.

Table 9: Analysis of moderation effect of success on the relationship between frequency and opportunity recognition motivators

	Base model			Including moderator		
	B	**SE**	**β**	**B**	**SE**	**β**
Intercept	3.2537***	0.0538	.00	3.2548***	0.0536	.00
Motivators	0.0529*****	0.0540	.04	0.0787*****	0.0564	.06
Success	0.8433	0.0406	.84	0.8365***	0.0407	.83
Motivators x success				-0.0583*****	0.0383	-.07
R^2	.71			.71		
ΔR^2	-			.00		
F	216.20***			145.95***		

*B = unstandardised coefficients, SE = standard errors, β = standardised coefficients. N = 187. *** = p<.01; ** = p<.05, * = p<.10. **** = $p > 0.05$, ***** = $p > .10$*

An analysis of the results detailed in Table 9 reveals that the independent variable "motivators" is not significant ($p = .1645$) ,therefore $p > .05$,and likewise the new interaction variable "motivators x success" is not significant as $p = .1291$, therefore $p > .05$.

The results therefore show that the beta coefficients for the moderator and the interaction variable are not statistically different from zero. This means that there is insufficient evidence to reject the null hypothesis of the research.

The null hypothesis is therefore retained for further testing and accordingly described as follows:

Success will not moderate the relationship between frequency of opportunity recognition and perceptions of motivators of opportunity recognition.

4.5.6 Cluster Analysis

In order to achieve an effective entrepreneurial climate, it is important for managers to understand how and why employees or groups of employees display differing entrepreneurial behaviours. This understanding will allow for appropriate managerial support and interventions to address the individual or grouping of individuals as opposed to one size fits all strategy to foster entrepreneurial activity in the company.

"A key leadership function is to promote, establish and maintain an entrepreneurial climate that helps to build entrepreneurial thinking and activity in today's organisations. This is essential for creating and managing an entrepreneurial architecture" (Oosthuizen, 2008: 223).

Both the perception of the entrepreneurial opportunity and its further development are inherently shaped by subjective, idiosyncratic factors (Buensdorf, 2007). Individual-difference factors may play an important role in entrepreneurs' success (Markman and Baron, 2003).

In order to investigate alternate classifications of respondents and provide a deeper understanding of the differing respondents' responses, a cluster analysis was performed on the three scales of opportunity recognition behaviours, opportunity recognition motivators, and alignment of opportunity recognition behaviours to corporate strategy.

The object of **cluster analysis** is to assign a set of objects into groups (called **clusters**) so that the objects in the same cluster are more similar to each other than to those in other clusters. In performing this analysis we can have a better understanding of the differentiating factors between the clusters.

The methodology utilised in the analysis of the clusters in this research is the k-means analysis methodology. The *k*-means algorithm assigns each point to the cluster whose centre is nearest. The centre is the average of all the points in the cluster. The k-means methodology is explained as "cases are reassigned by moving them to the cluster whose centroid is closest to that case. Reassignment continues until every case is assigned to the cluster with the nearest centroid. Such a

procedure implicitly minimises the variance within each cluster" (Punj and Stewart, 1983: 139). The technique of cluster analysis is a useful approach in the analysis of variance (Scott and Knott, 1974). They state further that when an F-test in an analysis of variance shows a difference in means, it is important to obtain some idea as to the nature of the differences.

The k-means cluster analysis conducted below, aims at understanding where significant differences arise, and then to delve into the nature of the differences.

The cluster analysis conducted on the data, allows for the data to be clustered into three distinct clusters based on the characteristics of each cluster as detailed in Figure 20 below:

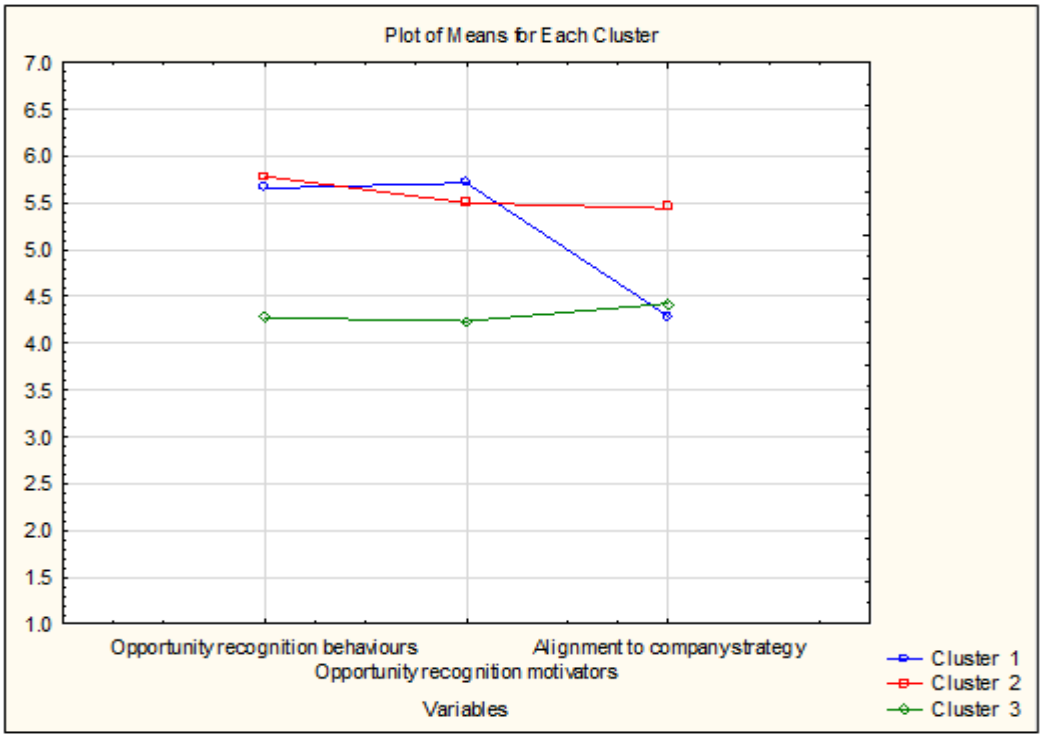

Figure 20: Plot of means for each Cluster by Construct

The clusters identified in Figure 20 above were named as follows and referred to as such in the analysis conducted below:

- Corporate Achievers
- Mavericks

- Doers

Analysis of the means of each cluster was analysed by construct.

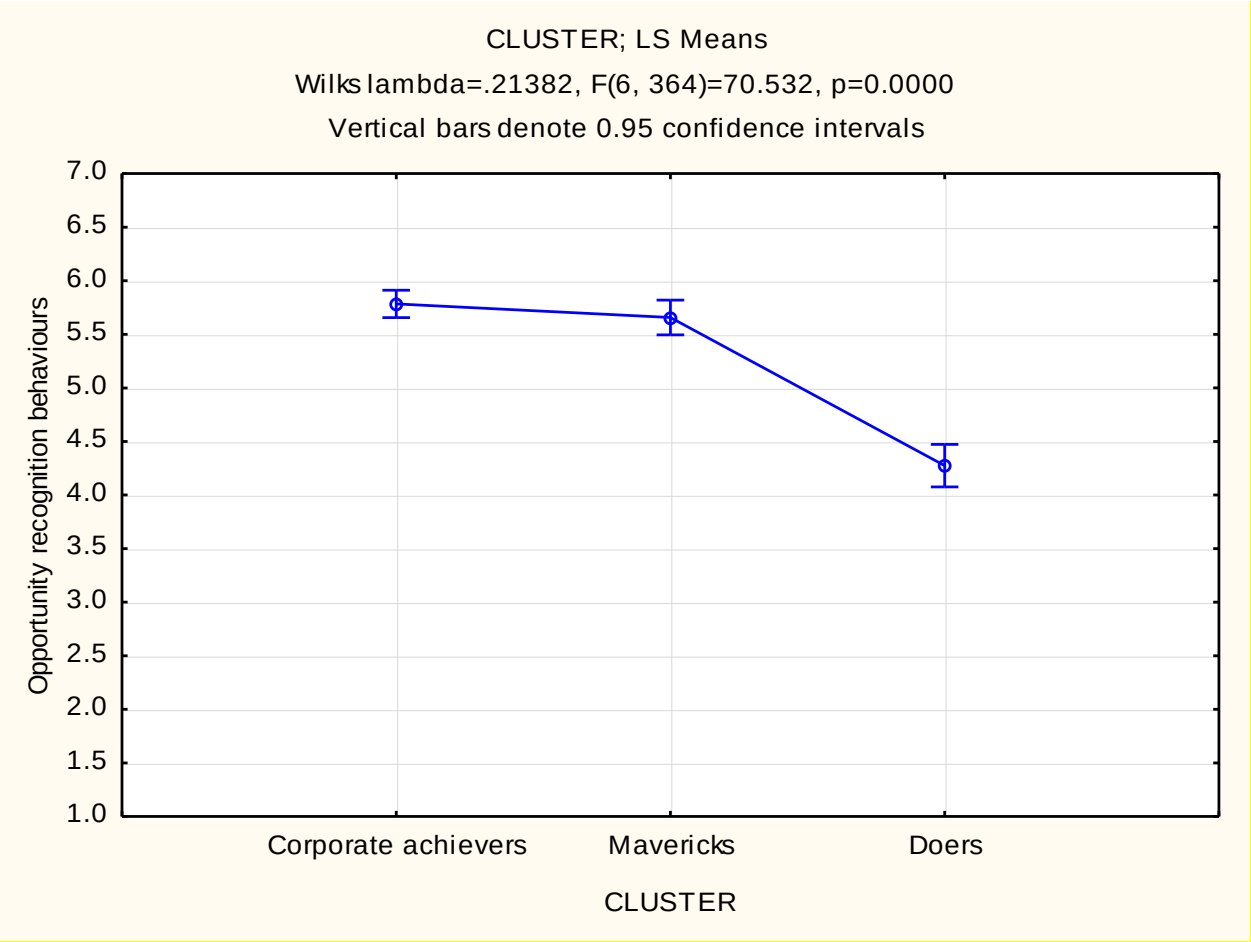

Figure 21: Analysis of cluster means vs Opportunity Recognition Behaviour

An analysis of the cluster means for opportunity recognition behaviours reveals that the doers perceive much lower levels of opportunity recognition behaviours than both the corporate achievers and the mavericks.

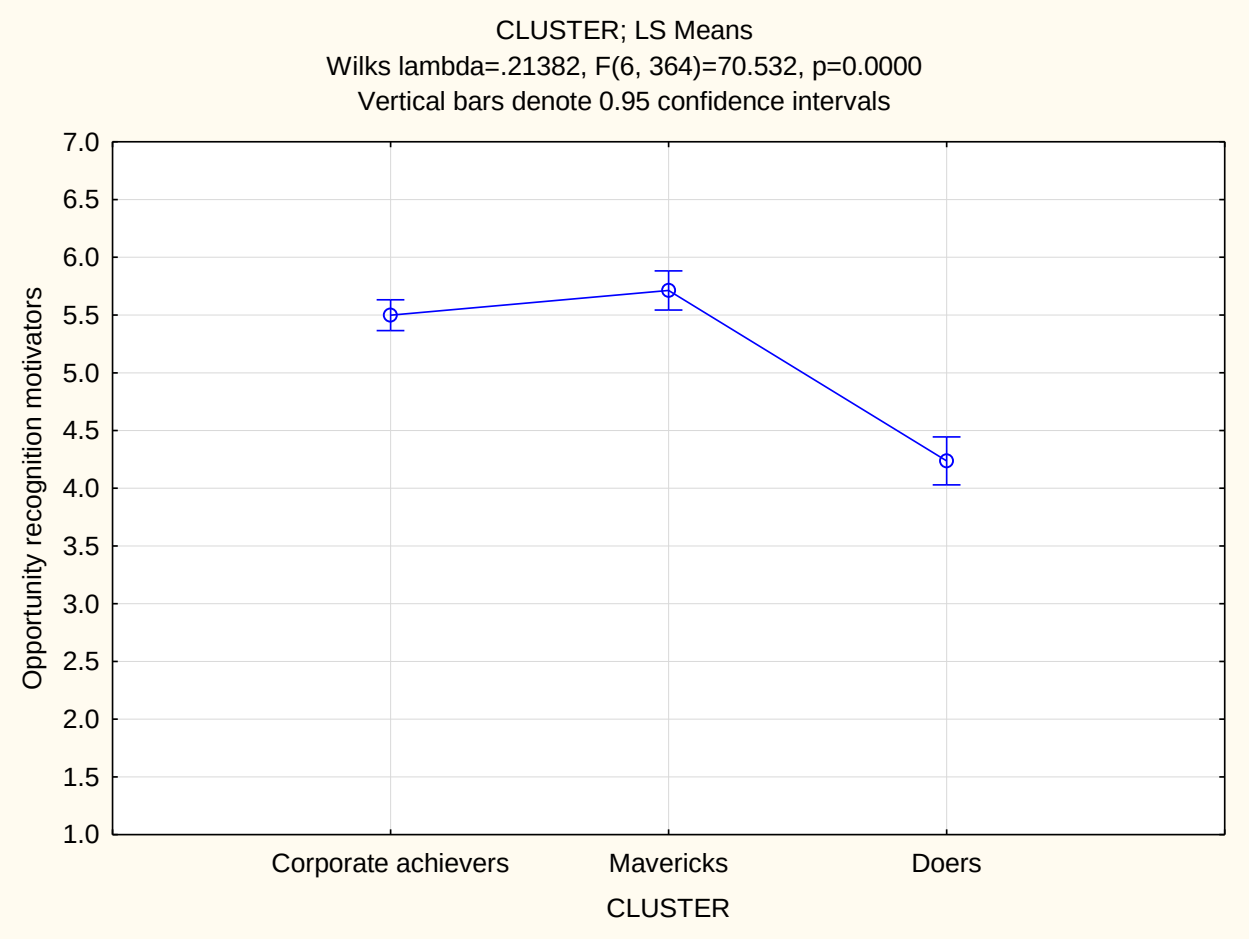

Figure 22: Analysis of cluster means vs opportunity recognition motivators

An analysis of the cluster means for opportunity recognition motivators shows that whilst the mavericks perceive a slightly higher level than the corporate achievers, the doers perceive a much lower level of opportunity recognition motivators than either the corporate achievers or the mavericks.

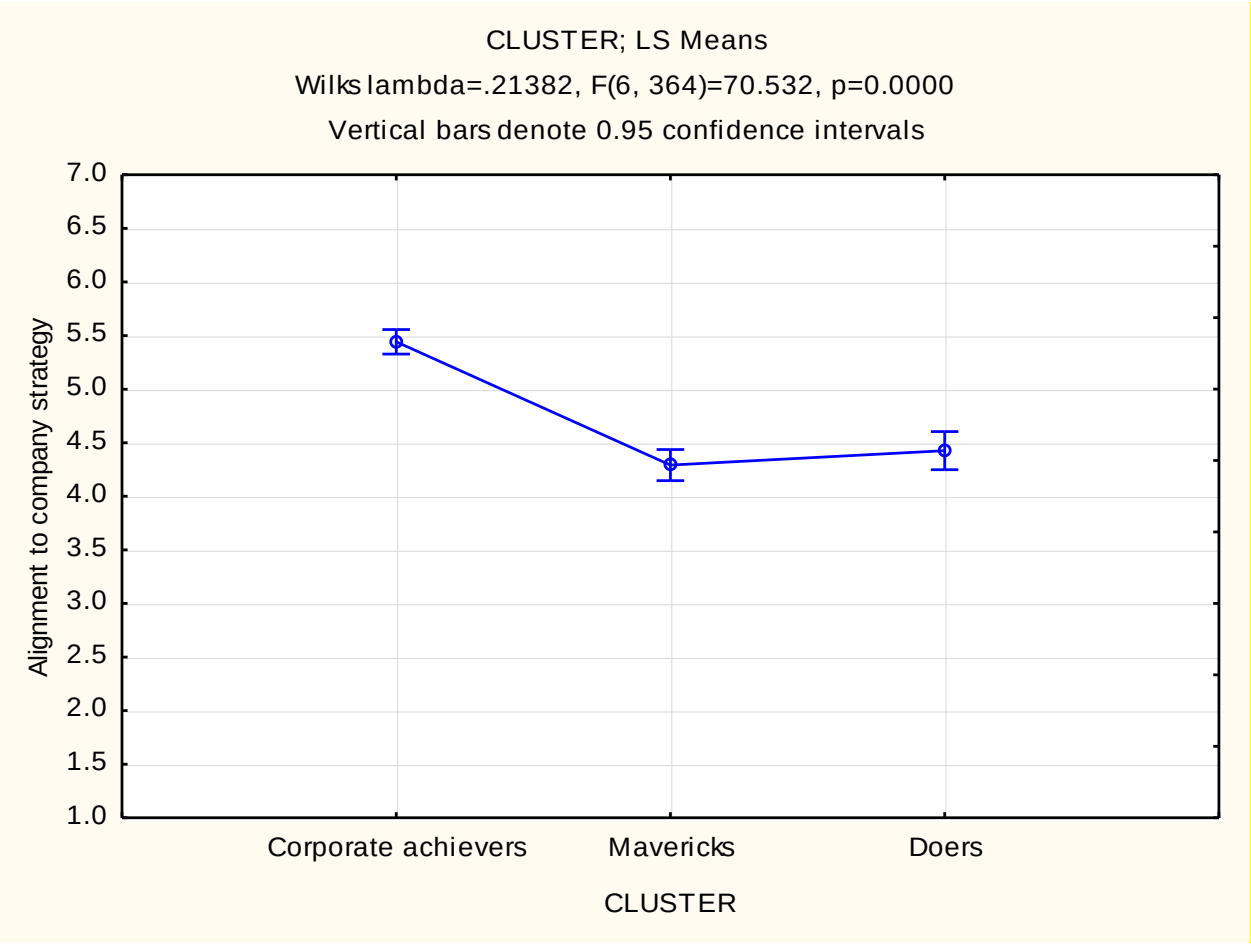

Figure 23: Analysis of cluster means vs alignment to company strategy

An analysis of the cluster means of alignment to company strategy reveals that corporate achievers perceive a much higher level of alignment to company strategy than either the mavericks or the doers.

A Wilks Lambda test of significance was run comparing the three constructs jointly as a vector (weighted linear combination). The results of which are detailed in Table 10 below.

Table 10: Wilks Lambda Test of Significance

Multivariate Tests of Significance (Merged clusters) Sigma-restricted parameterization Effective hypothesis decomposition						
	Test		**F**	**Effect - df**	**Error - df**	**p**
Intercept	Wilks	0.007551	7973.080	3	182	0.00
CLUSTER	Wilks	0.213818	70.532	6	364	0.00

An analysis of the Wilks Lambda analysis shows that F = 70,532 and $p < 0{,}01$ for the clusters. This indicates that there do appear to be significant differences between the clusters.

The means of each cluster by construct, as well the number and percentages of respondents in each cluster are provided in Table 11 below:

Table 11: Means of the Clusters by Construct

Construct	**Cluster 1 ("Corporate Achievers"): n=57 (30% of respondents)**	**Cluster 2 ("Mavericks") n=92 (49% of respondents)**	**Cluster 3 ("Doers") n=38 (20% of respondents)**
Opportunity recognition behaviours	5.66	5.78	4.28
Opportunity recognition motivators	5.71	5.50	4.24
Alignment to company strategy	4.29	5.44	4.43

In order to investigate the differences between the clusters on the constructs, a Scheffe post hoc analysis was conducted and the results are reported in Table 12 below.

Table 12: Scheffe Post Hoc Analysis of Clusters

Construct	Corporate Achievers	Mavericks	Doers	Corporate Achievers vs Mavericks	Corporate Achievers vs Doers	Mavericks vs Doers
Opportunity Recognition Behaviours	5.78	5.66	4.27		***	***
Opportunity Recognition Motivators	5.50	5.71	4.24		***	***
Alignment to Company Strategy	5.44	4.29	4.43	***	***	

*** =$\rho < .05$

An analysis of the results of the Scheffe post hoc analysis reveals that:

- There is a significant difference between the corporate achievers and the mavericks as regards alignment to company strategy.
- There is a significant difference between corporate achievers and doers as regards opportunity recognition behaviours, opportunity recognition motivators and alignment to company strategy.
- There is a significant difference between mavericks and doers as regards opportunity recognition behaviours and opportunity recognition motivators.

An analysis was then conducted in which the clusters were analysed by the respondents responses to the demographic questions contained in the questionnaire, as well as by the questions relating to frequency and success of opportunities identified and implemented. The key differences arising from this analysis are reported in Figure 23 below.

The key observations resulting from this analysis will be discussed thereafter.

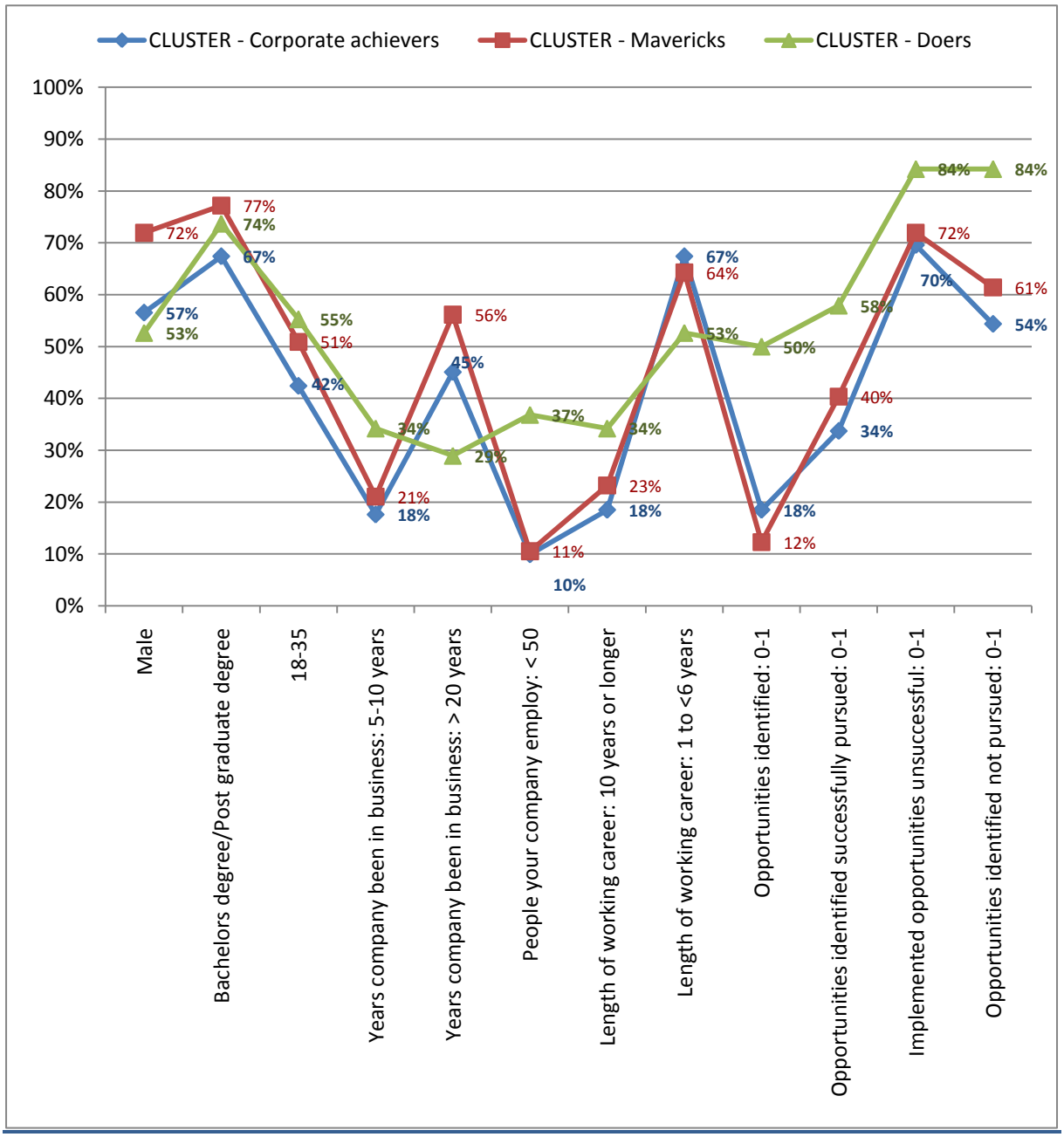

Figure 24: Analysis of clusters by key differentiating factors

The following notable observations emerge from analysis of the results in Figure 23:

- An overwhelming number of the mavericks (72%) are male compared to 57% of the corporate achievers and 53% of the doers.
- The mavericks have the highest number of respondents with a University degree (77%), compared to the corporate achievers at 74% and the doers at 67%.
- The doers are mainly (55%) aged between 18-35 as opposed to the mavericks (51%) and the corporate achievers (42%)

  One in three doers (34%) work for companies that have been in business for 5-10 years as opposed to 21% of the mavericks and 18% of the corporate achievers
- The majority of the mavericks (56%) work for companies that have been in business longer than twenty years as opposed to 45% of the corporate achievers and 29% of the doers.
- A large portion of the doers (37%) work for smaller companies that employ less than 50 employees, as opposed to 11% of the mavericks and 10% of the corporate achievers.
- A large portion of the doers (34%) have been in their careers for ten years or longer as opposed to 23% of the mavericks and 18% of the corporate achievers.
- Two-thirds (67%) of the corporate achievers and 64% of the mavericks have only been in their working careers for 1-6 years as opposed to 53% of the doers.
- Half the doers have identified only 0-1 opportunities for their company, as opposed to 18% of the corporate achievers and 12% of the mavericks.
- The vast majority (88%) of the mavericks, and 82% of the corporate achievers have identified more than one opportunity for their company as opposed to only 50% of the doers.

- The corporate achievers show a high level of successfully implemented opportunities with two-thirds (66%) having implemented more than one opportunity for their current company). The mavericks also display a relatively high percentage of 60%, whilst the doers only have 42% of the cluster having implemented more than 1 opportunity for their current employer.

4.5.6.1 Cluster Traits

Having analysed the clusters and having identified key differences and the significance of differences between the clusters, the key traits and defining differences between the clusters are summarised as follows:

4.5.6.2 Corporate Achievers

The corporate achievers cluster tends to perceive high levels of opportunity recognition behaviour, relatively high levels pertaining to opportunity recognition motivators, and a high perception of alignment to company strategy.

The corporate achievers are mainly male (57%), with a high level of education (74% have a university degree). They tend to be older (58% are over 35), work for larger companies (90% work for companies with more than 50 employees and 45% work for companies that have been in business for more than 20 years). They show a tendency to recognise a large number of opportunities (82% have identified more than 1 opportunity for their current company), and 66% have successfully implemented more than one opportunity for their current company.

4.5.6.3 Mavericks

The mavericks cluster tends to perceive relatively high opportunity recognition behaviours, and high levels pertaining to opportunity recognition motivators, but lower levels of perception of alignment to company strategy.

The mavericks are overwhelmingly male (72%), with a high level of education (77% have a university degree). They tend to be younger (51% are aged 18-35), work for larger, more mature companies (89% work for companies with more than 50 employees and 56% work for companies that have been in business for more than 20 years). They show a tendency to recognise a large number of opportunities (82% have recognised more than 1 opportunity for their current company), and 60% have successfully implemented more than one opportunity for their current company.

4.5.6.4 Doers

The doers cluster tends to perceive relatively low levels of opportunity recognition behaviour, relatively low levels of perceptions of motivators and relatively low levels of perceptions of alignment to company strategy.

The doers are relatively evenly mixed between male and female (53% are male), with a relatively good level of education (67% have a university degree). They tend to be younger (55% are aged 18-35), and work for smaller and less mature companies (69% work for companies that have been in business for less than 20 years, and 37% work for companies with less than 50 employees). They recognise a small number of opportunities (50% have identified 1 or less opportunities for their current company, and only 42% have successfully implemented more than 1 opportunity for their current employer).

4.5.7 Cluster Analysis Conclusion

The **corporate achiever** cluster tends to perceive high levels of opportunity recognition behaviour and motivators; they recognise a large number of opportunities and show the highest proportion of successfully implemented opportunities. They also perceive the highest proportion of alignment to company strategy. This high proportion of perceived alignment to company strategy combined with high levels of opportunity recognition behaviours may encourage more of the proposed opportunities to be in line with company strategy, which in turn may lead to the higher proportion of successfully implemented opportunities.

The **maverick** cluster also tends to perceive high levels of opportunity recognition behaviour and motivators; they recognise a large number of opportunities, but are behind the corporate achiever cluster when it comes to the proportion of successfully implemented opportunities. They perceive the lowest proportion of alignment to company strategy. Although this cluster shows a large proportion of opportunities proposed for their current company, their low perception of alignment to company strategy may mean that the opportunities they recommend do not always fit into the company strategy, which may explain their lower proportion of successfully implemented opportunities. As large organisations tend to be characterized by more methodical decision-making, such environments can be very stifling for those more comfortable with biased and heuristic reasoning (Busenitz and Barney, 1997). If an organisation values such individuals, it is important to find organizational contexts for letting these individuals make their contributions.

The **doers** cluster tends to perceive low levels of opportunity recognition behaviour and motivators. They also perceive relatively low levels of alignment to company strategy. They show a low proportion of opportunities proposed for their current company (50% have identified 1 or less opportunities for their current company, and only 42% have successfully implemented more than 1 opportunity for their current employer).Respondents in this cluster seem to do their work, but show low levels of entrepreneurial orientation.

CHAPTER V

5 Conclusion, study limitations and areas for further research

5.1 Conclusion

The world is in the midst of a new wave of economic development with entrepreneurship and innovation as the catalysts. The ability to continually innovate and to engage in an ongoing process of entrepreneurial action has become the source of competitive advantage and a lack of entrepreneurial actions in today's global economy could be a recipe for failure (Kuratko, 2009).

Organisations need to keep abreast of developments in their business environment and continually identify and evaluate opportunities if they are to prosper in a rapidly changing world, and they must become more entrepreneurial as their corporate environments become more dynamic and increasingly competitive (Shepherd, Patzelt and Haynie, 2009). Dramatic and ongoing changes force executives to regularly re-examine the basic purpose of their organizations, and to become much more flexible in their approach to serving multiple stakeholders. Companies find themselves having to continually redefine their markets, restructure their operations, and modify their business models in order to remain competitive and relevant (Kuratko, 2009). As part of this rigorous exercise, they have to re-examine their approach for promoting entrepreneurial opportunity recognition among all employees.

Entrepreneurial opportunities can be seen as central to the entrepreneurial process. Entrepreneurial opportunities can be broadly defined as a set of environmental conditions that lead to the introduction of one or more new products or services in the market place by an entrepreneur or by an entrepreneurial team through either an existing venture or a newly created one (Dutta and Crossan, 2005).

Entrepreneurial opportunities are identified and exploited through entrepreneurial behaviour displayed by the entrepreneur or group of entrepreneurs. Thus, this research proposes to make a modest contribution to the further understanding of opportunity recognition behaviours and motivators by employees in the South African financial sector. Cluster analysis has also been conducted to further understand the variance between the different clusters and add to the body of knowledge around the academic questions as to how opportunities are discovered and by whom.

Opportunity recognition behaviour is therefore a central and essential part of the entrepreneurial process, and has been defined as the discovery, evaluation and exploitation of entrepreneurial opportunities (Venkataraman, 2000).

Understanding entrepreneurial behaviour – why people choose to become entrepreneurs in the first place, how they make decisions, why they do or do not recognise opportunities, how they seek to influence others, and how they coordinate their activities with others is crucial to furthering current understanding of the entrepreneurial process as discussed in numerous academic studies (Covin and Slevin, 1991; Kuratko et al, 2005; Kuratko, 2009; Covin and Hornsby, 2005, as cited in Zampetakis et al, 2009).

Proper understanding of entrepreneurial behaviour is particularly important in existing businesses in order to identify mechanisms of promoting these behaviours among their employees, so that organisations will be able to continuously reinvent themselves in the marketplace.

Entrepreneurial behaviour may be defined as the discovery, evaluation and exploitation of entrepreneurial opportunities (Shane and Venkataraman, 2000). Corporate entrepreneurship may be seen as the application of this entrepreneurial behaviour by employees of existing enterprises. Corporate entrepreneurship can therefore be seen as a subset of entrepreneurship (i.e. entrepreneurial activity that originates within established ventures).

In the company context corporate entrepreneurship encompasses all actions taken by employees relating to the discovery, evaluation and implementation of entrepreneurial opportunities. Corporate entrepreneurship has two primary aims: the

creation and pursuit of new venture opportunities and strategic renewal (Dess and Lumpkin, 2005). Corporate entrepreneurship involves organizational learning, driven by collaboration, creativity and individual commitment (Hayton, 2005).

Entrepreneurial orientation has been seen to have positive effects on firm performance; therefore ways to develop or motivate entrepreneurial behaviours and promote the context that supports such behaviours need to be devised (Poon, Ainuddin and Junit (2006).

The more employees perceive they are receiving support from the organisation, the more they might be expected to feel a sense of obligation and be inclined to reciprocate in both attitudinal and behavioural ways (Zampetakis, Beldekos and Moustakis, 2009).

Entrepreneurs should seek to create a work environment that is conducive to maintaining a continuous state of proactiveness, innovativeness and risk-taking; and employees need to know about and understand the strategic visions of their organizations (Kuratko, 2009). This understanding is a critical element of any strategy that requires innovative entrepreneurial inputs from the employees. This shared vision requires the identification and understanding of specific objectives of the corporate entrepreneurial strategies, and of the programs that are required in order to achieve the objectives. Entrepreneurial orientation enhances corporate performance and should lead to a pay-off for a firm at least over time, and firms not aiming for this may be less successful in the long run (Madsen, 2007).

This research analysed the extent to which employees perceive themselves as displaying opportunity recognition behaviours. One of the findings of this research endeavour is that South African financial sector employees perceive themselves as showing strong levels of opportunity recognition behaviours.

The entrepreneurial behaviour displayed by employees would be as a consequence of the company's corporate entrepreneurial strategy, which would start with an entrepreneurial strategic vision, which in turn leads to a pro-entrepreneurship organizational structure and what follows would be the entrepreneurial processes

and behaviours as exhibited across the entrepreneurial hierarchy (Ireland, Covin and Kuratko, 2009 as detailed in Figure 2).

Whilst entrepreneurial behaviour on the part of individuals is neither controllable nor predictable, it can be fostered and facilitated.

The other important dimension that organizations need to understand in order to enhance their entrepreneurial orientations is opportunity recognition motivators. An analysis of the literature reveals at least three factors that influence the entrepreneurial process, namely motivational factors, cognitive factors (including ability, intelligence and skills) and environmental factors which comprises of the status of the economy, the availability of venture capital, the actions of competitors and government regulations).

There is a clear interaction between entrepreneurial motivations, opportunities and environmental conditions as shown in the model of entrepreneurial motivation and entrepreneurial process as shown in Figure 7. The lack of complete understanding of the impact of motivations and behaviours on the entrepreneurship process hinders organizations and government agencies from coming up with effective tools and mechanisms to encourage employees to participate in entrepreneurial activities (Morris, Van Vuuren, Cornwall and Scheepers, 2009).

Human motivations have great significance for the entrepreneurial process. Entrepreneurial motivation is an inner drive towards entrepreneurial goals. It energizes, directs and sustains new venture creation and growth (Baum et al, 2007). The emotional signals individuals receive from their environment influence their motivation to act entrepreneurially, and the development of entrepreneurship theory requires consideration of the motivations of people making entrepreneurial decisions as is detailed in numerous academic studies (Baron ,2002; Brundin, Patzelt and Shepherd, 2008, as quoted in Zampetakis et al ,2009; Baum et al, 2007, and Shane et al, 2003). Emotions influence not only opportunity evaluation, but also opportunity exploitation (Grichnik, Smeja and Welpe, 2010).

The model of entrepreneurial motivation and the entrepreneurial process as proposed by Shane et al (2003) and detailed in Figure 7 highlights the importance of

entrepreneurial motivations as an integral part of the entrepreneurship process. They separate task specific motivations (goal setting and self efficacy) from general motivations (need for achievement, locus of control, vision, desire for independence, passion, and drive).

The entrepreneurial process in the corporate environment should be viewed as a willing endeavour of employees. Firms depend on the willing engagement of employees to lend their efforts to entrepreneurial projects (Monsen, Patzelt and Saxton, 2009). Personality differences and intrinsic motivation are likely to affect ones persistence to pursue an idea, ones likelihood to abandon one's beliefs in the idea, and one's desire and ability to discuss and defend the idea in a broader social context. Developing a deeper understanding of the complexities of the creative product and situation associated with opportunity recognition represents a fruitful area for advancing entrepreneurship research (Dimov, 2007).

This research analysed the extent to which employees perceive that opportunity recognition motivators are important. The results of this research show that employees do perceive that opportunity recognition motivators are important, affirming and building upon the conclusions of prior research.

Entrepreneurs utilise cognitive frameworks in opportunity identification and that they build up a pattern recognition process which allows them to identify further opportunities (Baron, 2006). As more opportunities are recognised this pattern recognition can be refined. This pattern recognition on opportunity recognition helps integrate three factors that have been found to play important role:

1. Engaging in an active search for opportunities
2. Prior knowledge of an industry or market
3. Alertness to opportunities

Pattern recognition helps explain interrelationships between the three factors, as well as helping to explain why some individuals but not others identify certain opportunities (Baron, 2006). The idea that prior knowledge of an industry is an

important positive factor in the opportunity recognition process is reinforced in the literature (Ardichvili et al, 2003; Corbett, 2007; Baron ,2006; and Corbett ,2005).

On the contrary, there is an academic view that says prior experience may limit entrepreneurs to identify opportunities within their experience, and the application of human cognition may limit our ability to efficiently identify and implement entrepreneurial opportunities (Zahra et al, 2005; Baron, 1998). The cognitive frameworks, pattern recognition and entrepreneurial alertness as detailed in the models discussed in the foregoing sections may be influenced by the entrepreneur's prior experience, and that prior experience may not be a positive influence on opportunity recognition (Zahra et al, 2005). Indeed it may limit entrepreneurs to identifying prior patterns and opportunities within the boundaries of their experience. Similarly, companies may be blinded by their past experiences which have the potential to slow their decisions (Zahra et al, 2005). Past experience may promote a rigid focus on familiar clues, causing new information to be ignored and that given the entrepreneurs extensive past experiences, newer situations may not generate surprises that trigger sense making and overlooking emerging opportunities (Zahra, Korri and Yu, 2005).

"As human beings, we seek to minimize cognitive effort, just as we seek to minimize physical effort. As a result, we often use various short cuts in our thinking, techniques that reduce mental effort" (Baron, 1998: 275). Whilst this application of human cognition may sometimes be effective, it could lead to serious errors in understanding the world around us, and limit our ability to efficiently identify and implement entrepreneurial opportunities.

This research further analysed whether opportunity recognition behaviours perceived by employees are related to the frequency of opportunities recognised. The results of this research show that there is a significant positive relationship between opportunity recognition behaviours and the frequency of opportunities recognised. However, because no research was conducted on the detailed nature of the opportunities recognised, this research is unable to support or disprove the contradicting research views prevailing as to whether the experience gained in

pattern recognition of opportunity identification is positive or negative for future opportunity identification.

Moderating effects, mediating effects, independent effects and interaction effects provide a useful framework for gaining additional insights into the entrepreneurial orientation (Lumpkin and Dess, 1996, as quoted in Antoncic and Hisrich, 2004). In an attempt to build on prior academic research, this research further analysed whether success moderates the relationship between frequency of opportunity recognition and perceptions of opportunity recognition behaviours and motivators.

The results of this research found that success moderates the relationship between frequency of opportunity recognition and perceptions of opportunity recognition behaviours. An analysis of the interaction of success on the relationship between frequency and behaviour as detailed in Figure 19 reveals the following:

- Respondents are likely to recognise a higher number of opportunities as more opportunities are successfully implemented.
- For those respondents who have a low or medium number of successfully implemented opportunities, the total number of opportunities recognised increases as their opportunity recognition behaviour increases.
- Those respondents who have a high number of successfully implemented opportunities tend to show a slight decrease (although this may not be significant) in the total number of opportunities identified as their opportunity recognition behaviour increases. This could be because those who have a high number of successfully implemented opportunities may become more discerning as they increase their level of opportunity recognition behaviours and only identify those opportunities with a higher chance of success. This seems to reinforce existing literature. Novice entrepreneur's images of opportunities are based on newness and uniqueness, while experienced entrepreneurs' images of opportunity are based on profitability and feasibility (Mitchell and Shepherd, 2010).

Further analysis of the moderation effect shows that those respondents who have a low or medium number of successfully implemented opportunities, recognise a

higher number of opportunities as their opportunity recognition behaviour increases. However, those respondents who have a high number of successfully implemented opportunities tend to show a slight decrease in the total number of opportunities identified as their opportunity recognition behaviour increases.

The key to maintaining relatively high levels of entrepreneurship within a company lies in understanding the basic nature of the entrepreneurial experience, recognising the inherent entrepreneurial potential of all employees, and creating work climates that allow employees to act on that potential (Morris, Van Vuuren, Cornwall and Scheepers, 2009). This is reinforced by the view that an appropriate work environment is necessary to foster entrepreneurial activity (Li, Su and Liu, 2010). Reflecting on the importance of knowledge sharing, company efforts to enhance employee knowledge sharing are associated with increased firm performance (Hsu, 2006). In the same vein, knowledge is increasingly recognised as the key underpinning resource (Lemon and Sahota, 2004). Effective innovation requires the creation, capture, harvest, sharing and application of knowledge and expertise.

In order to achieve an effective entrepreneurial climate, it is important for managers to understand how and why employees or groups of employees display differing entrepreneurial behaviours. This understanding will allow for appropriate managerial support and interventions to address the individual or grouping of individuals as opposed to one size fits all strategy to foster entrepreneurial activity in the company. The application of appropriately differentiated entrepreneurial support for employees may go some way towards achieving the reciprocal sense of obligation reported by Zampetakis, Beldekos and Moustakis, (2009).

Both the perception of the entrepreneurial opportunity and its further development are inherently shaped by subjective, idiosyncratic factors (Buensdorf, 2007). This view of individual differences in entrepreneurial success is reinforced by Markman and Baron (2003) who state that individual-difference factors may play an important role in entrepreneurs' success.

Though an organization has put in place the necessary strategy and structure supportive of entrepreneurial initiatives, and after having communicated the

rationales for pursuing entrepreneurial activities, the organization needs to identify the internal and external environmental factors that can induce and set in motion the process of entrepreneurial initiatives across the company.

In order to investigate alternate classifications of respondents and provide a deeper understanding of the differing respondents' responses, a cluster analysis was performed on the three scales of opportunity recognition behaviours, opportunity recognition motivators, and alignment of opportunity recognition behaviours to corporate strategy.

The k-means analysis has been used in this research to conduct a cluster analysis. This procedure implicitly minimises the variance within each cluster. The technique of cluster analysis is considered a useful approach in the analysis of variance (Scott and Knott, 1974). When an F-test in the analysis of variance shows a difference in means, it is important to obtain some idea as to the nature of the differences.

The k-means cluster analysis is conducted to understand where significant differences arise, and then to delve into the nature of the differences.

The cluster analysis conducted on the data allowed for the data to be clustered into three distinct clusters, which were then labelled according to their displayed traits, namely **corporate achievers, mavericks and doers**.

A detailed analysis of the characteristics of the clusters was undertaken and the following notable observations emerged from analysis of the results as presented in Figure 23:

- An overwhelming number of the mavericks (72%) are male compared to 57% of the corporate achievers and 53% of the doers.
- The mavericks have the highest number of respondents with a University degree (77%), compared to the corporate achievers at 74% and the doers at 67%.
- The doers are mainly (55%) aged between 18-35 as opposed to the mavericks (51%) and the corporate achievers (42%)

One in three doers (34%) work for companies that have been in business for 5-10 years as opposed to 21% of the mavericks and 18% of the corporate achievers

- The majority of the mavericks (56%) work for companies that have been in business longer than twenty years as opposed to 45% of the corporate achievers and 29% of the doers.
- A large portion of the doers (37%) work for smaller companies that employ less than 50 employees, as opposed to 11% of the mavericks and 10% of the corporate achievers.
- A large portion of the doers (34%) have been in their careers for ten years or longer as opposed to 23% of the mavericks and 18% of the corporate achievers.
- Two-thirds (67%) of the corporate achievers and 64% of the mavericks have only been in their working careers for 1-6 years as opposed to 53% of the doers.
- Half the doers have identified only 0-1 opportunities for their company, as opposed to 18% of the corporate achievers and 12% of the mavericks.
- The vast majority (88%) of the mavericks, and 82% of the corporate achievers have identified more than one opportunity for their company as opposed to only 50% of the doers.
- The corporate achievers show a high level of successfully implemented opportunities with two-thirds (66%) having implemented more than one opportunity for their current company). The mavericks also display a relatively high percentage of 60%, whilst the doers only have 42% of the cluster having implemented more than 1 opportunity for their current employer.

The main characteristics of the three clusters are summarised as follows:

The **corporate achiever** cluster tends to perceive high levels of opportunity recognition behaviours and motivators; they recognise a large number of opportunities and show the highest proportion of successfully implemented opportunities. They also perceive the highest proportion of alignment to company

strategy. This high proportion of perceived alignment to company strategy combined with high levels of opportunity recognition behaviours may encourage more of the proposed opportunities to be in line with company strategy, which in turn may lead to the higher proportion of successfully implemented opportunities.

The **maverick** cluster also tends to perceive high levels of opportunity recognition behaviour and motivators; they recognise a large number of opportunities, but are behind the corporate achiever cluster when it comes to the proportion of successfully implemented opportunities. They perceive the lowest proportion of alignment to company strategy. Although this cluster shows a large proportion of opportunities proposed for their current company, their low perception of alignment to company strategy may mean that the opportunities they recommend do not always fit into the company strategy, which may explain their lower proportion of successfully implemented opportunities. This is reinforced by the view that "as large organisations tend to be characterized by more methodical decision-making, such environments can be very stifling for those more comfortable with biased and heuristic reasoning" (Busenitz and Barney, 1997). If an organisation values such individuals, it is important to find organizational contexts for letting these individuals make their contributions.

The **doers** cluster tends to perceive low levels of opportunity recognition behaviour and motivators. They also perceive relatively low levels of alignment to company strategy. They show a low proportion of opportunities proposed for their current company (50% have identified 1 or less opportunities for their current company, and only 42% have successfully implemented more than 1 opportunity for their current employer). Respondents in this cluster seem to do their work, but show low levels of entrepreneurial orientation.

5.2 Limitations and Future Research

This study has several limitations, which may provide opportunities for future research. The study collected data based on respondent's self- reports, thereby casting doubt on the validity of the conclusions drawn.

No details were gathered surrounding the detailed nature of opportunities recommended, or the detailed nature of the successful or unsuccessful opportunities pursued. Future studies could investigate the detailed nature of these opportunities, and not simply on the number of opportunities, which could add significantly to understanding the opportunity recognition behaviours of employees.

This study was conducted on a limited sample base using a convenience sample. Doubt may be cast on the validity of the results and the ability to make generalised conclusions. Future studies can include a larger representative sample in order to validate or disprove the findings contained in this study.

This research found that success moderates the relationship between opportunity recognition behaviours and frequency of opportunities recognised. Future research could examine this relationship further and examine the nature of the opportunities. Does success lead to a more focussed search for future opportunities, and does this lead to a greater proportion of successfully implemented opportunities relative to the opportunities identified.

This study attempts to provide fresh insight into the nature of perceptions of opportunity recognition behaviours and motivators displayed by employees. In addition the study has attempted to analyse the nature of groupings (clusters) of individuals and their key differences. Future research may wish to delve further into a detailed analysis of these clusters in order to further build on our understanding of opportunity recognition by employees.

This study was conducted within the South African financial sector. Further studies could expand across other industries, which would provide additional and interesting insights.

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APPENDICES

Appendix 1: Questionnaire

Opportunity Identification by Employees in South Africa's Financial Sector

1. WITS BUSINESS SCHOOL MASTER OF MANAGEMENT RESEARCH SURVEY

SELF REPORT SURVEY

Thank you for partcipating in this survey and your input will go a long way in creating empirical data that will contribute towards business science research in South Africa in particular and other emerging economies in general.

The results of the study will be published in a graduate dissertation and in referenced International Business Science Journal. As such, all responses from this survey will be treated with high research ethics and confidentiality as is stipulated in the WBS Code of Ethics.

The survey has five (5) main sections:
1. Demographics
2. Opportunity Recognition Behaviours Scale
3. Motivators Scale
4. Motivators for Multiple Opportunity Recognition Scale
5. Alignment to Strategy Scale

For purposes of this research, opportunities are defined as the collection of formal and informal activities resulting in the creation of new business ventures or other innovative activities such as the development of a new product, services, technologies, administrative techniques etc.

DEMOGRAPHICS
Firstly we would like to ask a few questions about yourself and organisation.

Background Information: Please select or fill in the appropriate answer.

1. Are you male or female?

- 1. Male
- 2. Female

2. What level of education do you have?

- Did not complete school
- Matric
- Trade qualification (Certificate OR Diploma)
- Bachelors degree
- Post graduate degree

3. What is your age?

- 18-25
- 26-35
- 36-45
- 45-54
- 55-64
- Over 64

Opportunity Identification by Employees in South Africa's Financial Sector

4. How many years has your company been in business?

- ○ < 5years
- ○ 5-10 years
- ○ 10-15 years
- ○ 15-20 years
- ○ > 20 years

5. How many people does your company employ?

- ○ < 50
- ○ 50-100
- ○ 100-200
- ○ > 200

6. Where in South Africa does your company conduct its principal business? (Select as many as required)

- ☐ Gauteng Province
- ☐ Limpopo Province
- ☐ North West Province
- ☐ Mpumalanga
- ☐ Kwa-Zulu Natal
- ☐ Eastern Cape
- ☐ Western Cape
- ☐ Northern Cape

7. How long have you worked at your current company?

- ○ <1 year
- ○ 1 to <2 years
- ○ 2 to <4 years
- ○ 4 years and longer

Opportunity Identification by Employees in South Africa's Financial Sector

8. How long has it been since you started your working career?

- ○ <1 year
- ○ 1 to <3 years
- ○ 3 to <6 years
- ○ 6 to <10 years
- ○ 10 years or longer

Opportunities are defined as the collection of formal and informal activities resulting in the creation of new business ventures or other innovative activities such as the development of a new product, service, technologies, administrative techniques, etc.

*** 9. How many opportunities have you identified for your current company?**

- ○ 0
- ○ 1
- ○ 2-4
- ○ 5-10
- ○ 10+

*** 10. How many of the opportunities that you identified for your current company have subsequently been successfully pursued by the company?**

- ○ 0
- ○ 1
- ○ 2-4
- ○ 5-10
- ○ 10+

*** 11. How many of the implemented opportunities that you identified for your current company have subsequently been unsuccessful?**

- ○ 0
- ○ 1
- ○ 2-4
- ○ 5-10
- ○ 10+

Opportunity Identification by Employees in South Africa's Financial Sector

* **12. How many opportunities have you identified for your current company that were not pursued by the company?**

- 0
- 1
- 2-4
- 5-10
- 10+

Opportunity Identification by Employees in South Africa's Financial Sector

2. Opportunity Recognition Behaviours

The following statements are meant to identify the drivers for opportunity recognition within your organisation.

Please indicate which response best represents your views.

To what extent do you agree/disagree with the following statements

1 = strongly agree and 7 = strongly disagree

*** 13. I understand the needs of our customers.**

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

14. I propose opportunities for my company that meet customer needs.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

15. I am able to identify an opportunity more quickly than others.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

16. I realize new opportunities are important for the development of my company.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

17. I use a step-by-step process as opposed to a one-time event in order to identify opportunities.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

18. I am creative in identifying opportunities.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

19. I draw on experience I have gained in my working career in order to identify opportunities.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

20. I rely on others to identify opportunities for the company.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

21. Brainstorming ideas in a team environment produces opportunities.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

Opportunity Identification by Employees in South Africa's Financial Sector

3. Motivators

22. If I recommend a successful opportunity, I will be rewarded financially.

1 Strongly Agree	2	3	4	5	6	7 Strongly Disagree

23. If I recommend a successful opportunity, I would like to see senior management's recognition of my involvement.

1 Strongly Agree	2	3	4	5	6	7 Strongly Disagree

24. If I recommend a successful opportunity, I would like to take charge of managing the venture.

1 Strongly Agree	2	3	4	5	6	7 Strongly Disagree

25. Rules, procedures and bureaucracy hinder the implementation of ideas.

1 Strongly Agree	2	3	4	5	6	7 Strongly Disagree

26. I enjoy the challenge of assisting my company to grow and succeed.

1 Strongly Agree	2	3	4	5	6	7 Strongly Disagree

Opportunity Identification by Employees in South Africa's Financial Sector

4. Motivators for multiple opportunity recognition

27. The management will cast a blame on me for recommending an opportunity that turned out to be unsuccessful.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

28. The company understands that we will all learn as much from opportunities that fail as from those that are successful.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

29. I am motivated to identify a continual stream of new opportunities in order for my company to grow and succeed.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

30. Financial reward by the company is important for me in order to remain motivated to continue providing the company with new opportunities.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

31. My company needs to recognise my involvement in successful opportunities in order to motivate me to identify further opportunities.

○ 1 Strongly Agree ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 Strongly Disagree

Opportunity Identification by Employees in South Africa's Financial Sector

5. Alignment to company strategy

32. My company's strategy is clear to me.

1 Strongly Agree | 2 | 3 | 4 | 5 | 6 | 7 Strongly Disagree

33. I aim to identify opportunities that are aligned to my company strategy.

1 Strongly Agree | 2 | 3 | 4 | 5 | 6 | 7 Strongly Disagree

34. The promotion of opportunity identification is an important part of my company's strategy.

1 Strongly Agree | 2 | 3 | 4 | 5 | 6 | 7 Strongly Disagree

35. I will promote a business opportunity even if it does not fit into my company's current strategy.

1 Strongly Agree | 2 | 3 | 4 | 5 | 6 | 7 Strongly Disagree

36. When I brainstorm ideas with work colleagues we only discuss ideas that fit the company's current strategy.

1 Strongly Agree | 2 | 3 | 4 | 5 | 6 | 7 Strongly Disagree

Appendix 2: Consistency Matrix

<table>
<tr><th colspan="5">The purpose of this research study is to determine employees' perceptions of their opportunity recognition behaviours and motivators within their respective corporate environments.</th></tr>
<tr><th>Hypotheses</th><th>Research questions</th><th>Source of Data</th><th>Type of data</th><th>Analysis</th></tr>
<tr><td>Null Hypothesis 1: Employees perceive that opportunity recognition behaviours do not play a meaningful role in identifying opportunities in their corporate environments.</td><td>To what extent do employees perceive themselves to be exhibiting/displaying opportunity recognition behaviours within their respective corporate environments?</td><td>Questionnaire On-line survey Question 13-21</td><td>Ordinal</td><td>Mean, Standard Deviation,</td></tr>
<tr><td>Null Hypothesis 2 : Employees perceive that opportunity recognition motivators do not play a meaningful role in identifying opportunities in their corporate environments.</td><td>To what extent do employees perceive opportunity recognition motivators to be important within their respective corporate environments?</td><td>Survey questions 22-31</td><td>Ordinal</td><td>Mean, Standard Deviation,</td></tr>
<tr><td>Null Hypothesis 3: Employees who propose a greater number of opportunities perceive that opportunity recognition behaviours are of the same importance as perceived by employees who propose fewer opportunities.</td><td>Are the opportunity recognition behaviours perceived by employees, related to the frequency and success of opportunities recognised?</td><td>Survey Questions 10-12, 13-21</td><td>Ordinal Interval</td><td>Mean, Standard Deviation, correlation</td></tr>
<tr><td>Null Hypothesis 4: Employees who propose many successful opportunities perceive that opportunity recognition motivators are of equal importance as perceived by employees who propose fewer successful opportunities.

Null Hypothesis 5: Success will not moderate the relationship between frequency and perceptions of behaviours and motivators of opportunity recognition.</td><td>Does the frequency with which employees generate opportunities relate to:
a) Employees perceptions of opportunity recognition motivators.
b) The success of implemented opportunities.
c) Interaction of frequency of opportunities recognized and their successful implementation (moderating effect). Does success of implemented opportunities moderate the relationship between frequency of opportunities recognized and perceptions of behaviours and motivators?</td><td>Survey questions 10-12, 13-21, 22-26</td><td>Ordinal Interval</td><td>Mean, Standard Deviation, hierarchical regression</td></tr>
</table>