

https://dspace.org/

The impact of compensation practices on intrapreneurial behaviour

Madu, Ugochukwu Obed

2012-11-02
http://hdl.handle.net/10539/12156

Downloaded from a DSpace repository. https://dspace.org/

THE IMPACT OF COMPENSATION PRACTICES ON INTRAPRENEURIAL BEHAVIOUR

By

UGOCHUKWU OBED MADU

A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree Master of Management in Entrepreneurship and New Venture Creation

SUPERVISOR: DOCTOR JOSE CELESTINO DIAS BARREIRA

Johannesburg, JUNE 2011

DECLARATION

I, Ugochukwu Obed Madu, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree Master of Management in Entrepreneurship and New Venture Creation, University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

.....

Ugochukwu Obed Madu

Signed at .....

DEDICATION

This research report is dedicated to Mr. Cyprian Ugochukwu Madu and Mrs. Bessy Nnena Madu, my lovely parents.

I am eternally grateful to them for not losing hope in me when I had serious academic setbacks.

Their commitment to see me succeed has brought me this far. Without their constant love and support, I would not be where I am today.

It is my desire to excel in all my endeavours, so that my lovely parents will never have an opportunity to regret all the investments they have made in me.

ABSTRACT

As business environments become more complex, with varying degrees of uncertainty, organizations must become more entrepreneurial in order to identify emerging and new opportunities for sustained superior performance. Several factors can promote/enhance corporate entrepreneurship within organizations.

This research study examined the role of compensation practices in the process of elevating employees' intrapreneurial behaviour. Drawing on the agency theory, hypotheses relating actual and desired compensation practices to elevated employees' intrapreneurial behaviour were empirically examined among different employees from various organizations. The moderating role of department's risk control on the relationship between desired compensation practices and elevated intrapreneurial behaviour was also examined.

Empirical data were collected from 209 respondents in different organizations via a survey questionnaire. The measures included actual compensation practices, desired compensation practices, actual intrapreneurial behaviour, elevated intrapreneurial behaviour, and department's risk control. The main analytical techniques used in this study were t-test for dependent/related groups, canonical correlation and moderation regression analyses.

The findings of this study indicated that non-monetary compensation practices were the best predictors of elevated intrapreneurial behaviour and that department's risk control did not moderate this relationship. However, it is unknown how the selection of industries will affect this study's findings.

In addition, desired compensation practices explained only 25% of the variance in elevated intrapreneurial behaviour, suggesting that compensation systems are not enough to elevate employees' intrapreneurial behaviour. Compensation systems should be an integral part of an overall entrepreneurial strategy of an organization.

ACKNOWLEDGEMENTS

No achievement in life is without the help of many known and unknown individuals who have impacted our lives. We owe every measure of our success to the array of input from so many. Here are just a few who made this work possible:

To my supervisor, Dr Jose Celestino Dias Barreira, who guided me so brilliantly on every stage of my research, and who is inspirational in his commitment to entrepreneurial development. His encouragement and speedy responses to my work have made it possible for me to finish this research on time.

To my friend and classmate, Mr. Vincent Molokwu, who offered me his monthly subscription to the survey monkey website. Without him, my data collection phase would have been a very strenuous process.

To Mrs. Zimasa Koyana, who asked the WBS MBA and PDM part-time students to help fill in my research questionnaire.

To Mrs. Merle Werbeloff, who took out the time to help me with my data analysis. Without her assistance, analyzing and interpreting my results would have been a very strenuous process.

Finally, I acknowledge and thank the many friends who encouraged and supported me in this work, especially during the data collection phase. I am forever grateful.

TABLE OF CONTENTS

Chapter 1: Introduction……11

1.1 Purpose of the study……..13

1.2 Research questions and hypotheses……..14

1.3 Context of the study……...16

1.4 Problem statement……17

1.5 Significance of the study……...18

1.6 Definition of terms……..19

1.7 Assumptions……21

Chapter 2: Literature review……22

2.1 Introduction……..22

2.2 Compensation practices……22

2.2.1 Theory about human resource management……23

2.2.1.1 Strategic theories of human resource management……..23

2.2.1.2 Descriptive theories of human resource management……..23

2.2.1.3 Normative theories of human resource management……24

2.2.2 Human resource management and performance: Theoretical framework……25

2.2.3 Human resource management practices……25

2.2.4 Human resource management and corporate entrepreneurship……26

2.2.5 Compensation practices and corporate entrepreneurship……...27

2.2.6 Compensation in organizations with a research and development laboratory.29

2.2.7 Compensation and organizational size……31

2.2.8 Compensation and organizational culture……..35

2.2.9 Executive compensation and innovation strategy……36

2.3 Intrapreneurship ……39

2.3.1 The concept of corporate entrepreneurship……40

2.3.2 Corporate entrepreneurship and the corporate entrepreneur……..41

2.3.3 Intrapreneurship and the intrapreneur……42

2.3.4 Proactivity……43

2.3.5 Manager's emotions and intrapreneurship……45

2.3.6 Antecedents of intrapreneurship……..47

2.4 Risk control……..49

2.4.1 Risk control and corporate entrepreneurship……51

2.4.2 Risk control and compensation……52

2.5 Theoretical framework and hypotheses development……..52

2.5.1 Resource-based theory……..53

2.5.1.1 Cognition in entrepreneurship……54

2.5.1.2 Entrepreneurial discovery of new opportunities and heterogeneity……55

2.5.1.3 Recognising market opportunities and heterogeneity……57

2.5.1.4 Coordination of specialized knowledge and heterogeneity……..58

2.5.2 Expectancy theory……..59

2.5.3 Agency theory……..61

2.5.3.1 Origins of agency theory……61

2.5.3.2 The positivist agency theory……..63

2.5.3.3 Principal-agent stream of agency theory ……64

2.5.3.4 Hypotheses development……...65

2.6 Conclusion……...69

CHAPTER 3: RESEARCH METHODOLOGY……..70

3.1 Introduction ……70

3.2 Literature review methodology ……71

3.3 Instrument design ……..72

3.4 Sampling and data collection ……..75

3.5 Data analysis techniques……..77

3.5.1 T-test for dependent groups……..77

3.5.2 Multivariate analysis approach……78

3.5.3 Moderation analysis……79

CHAPTER 4: PRESENTATION OF RESULTS ……..80

4.1 Internal consistency reliability……..80

4.2 Descriptive statistics……..81

4.3 Statistical test results……87

4.3.1 Actual compensation practices versus desired compensation practices……...87

4.3.2 Actual compensation practices versus elevated intrapreneurial behaviour….89

4.3.3 Desired compensation practices versus elevated intrapreneurial behaviour..92

4.3.4 Moderation analysis……96

4.4 Study limitations……97

CHAPTER 5: CONCLUSIONS AND IMPLICATIONS……99

5.1 Discussion……...99

5.2 Relevance of findings……..103

5.3 Further research……...103

References……..105

Appendix 1……...118

Appendix 2……...124

Appendix 3……...125

LIST OF FIGURES

Figure 1: Schematic representation of hypothesized relationships……71

Figure 2: Gender of respondents…….....81

Figure 3: Age of respondents……..82

Figure 4: Job position……...82

Figure 5: Years spent in current organization……..83

Figure 6: Organization's industry……83

Figure 7: Organization's size……..84

Figure 8: Bar graph of elevated intrapreneurial behaviour means……85

Figure 9: Bar graph of department's risk control means……86

Figure 10: Means of actual compensation practices versus desired compensation practices ……...87

LIST OF TABLES

Table 1: Existing definitions……19

Table 2: Compensation time horizon and risk relationship……37

Table 3: Agency theory overview……...62

Table 4: Means and standard deviation of elevated intrapreneurial behaviour scale……85

Table 5: Means and standard deviation of risk control scale……86

Table 6: Actual and desired compensation practices for intrapreneurs (t-test dependent samples)……88

Table 7: Total redundancy for actual compensation practices versus elevated intrapreneurial behaviour……89

Table 8: Actual compensation practices and elevated intrapreneurial behaviour ….91

Table 9: Variance of root 1 extracted (proportions)……92

Table 10: Total redundancy for desired compensation practices versus elevated intrapreneurial behaviour……93

Table 11: Desired compensation practices and elevated intrapreneurial behaviour ……94

Table 12: Variance of root 1 extracted (proportions)……..95

Table 13: Regression summary for dependent variable (elevated intrapreneurial behaviour 1st canonical root)……...96

CHAPTER 1: INTRODUCTION

Human capital is a critical resource to most organizations while human resource management is used by managers to integrate the actions of employees to keep their behaviour congruent with the interests of the organization (Liao, 2005:294). Organizations have recognized that the human resource function has a direct impact on bottom line results and therefore understanding how this relationship works is very crucial. With increasing and aggressive competition, most business leaders agree that employees are perhaps the only truly sustainable source of competitive advantage; as such, efficient management of human capital may be the ultimate determinant of organizational performance (Liao, 2005).

In the bid to understand how human resource management impacts organizational performance, several constructs like business strategy and corporate entrepreneurship have been used (Liao, 2005). The human resource management practice that this study focuses on is “compensation.” Contingency theory holds that human resource management practices are determined by the kind of business strategy an organization follows. It assumes that organizations which coordinate their business strategy with human resource management practices perform better than organizations which do not (Liao, 2005:295). Thus, it is crucial for an organization to coordinate its compensation practices with its strategic objectives in order to secure a competitive advantage and support the desired behaviour from its employees (Lerner, Azulay, and Tishler, 2009:53). Compensation practices enable organizations to translate their general and long-term dimensions of strategy into the specific and daily actions of employees (Lerner et al, 2009).

In addition, corporate entrepreneurship can be studied at various levels, the most important levels being the organizational and the individual/employee level (Antoncic and Hisrich, 2003:8). This study seeks to understand corporate entrepreneurship at employee level (intrapreneurship). To examine intrapreneurship, the employee’s intrapreneurial behaviour (innovation, proactiveness, and risk-taking) will be measured. Only employees from entry to managerial level will be included in the

sample. Executives and directors will not form part of the respondents used for data analysis.

Sexton and Camp (1993) recognized that a compensation system that promotes innovation is one of the main organizational factors believed to enhance intrapreneurial behaviour within the organization. In the presence of such a compensation system, employees tend to become more innovative, more proactive, and are willing to take risks leading to a general increase in employees' intrapreneurial behaviour. Thus, if top management believes that enhancing employees' intrapreneurial behaviour will contribute to fulfilling the organization's goals, then they need to ensure a compensation system which will promote innovation (Lerner et al, 2009:54).

1.1 Purpose of the study

While the relationship between compensation and innovation has been extensively documented (Hayton, 2005:25), this study seeks to extend this relationship by examining the relationship between desired compensation practices and elevated intrapreneurial behaviour. According to Lerner et al (2009), intrapreneurial employees prefer/desire outcome-based compensation practices which refers to those which are directly linked to success of the intrapreneur's idea/initiative/new venture; for example, options in new venture equity, variable bonuses for milestones achieved, and so on.

In addition, the moderating effect of department's risk control on the above mentioned relationship is examined. Department's risk control refers to how the employee's current department manages risk. The following are the main objectives for this study ranked from the most integrative to the more specific objective:

- To conduct a general literature review on three constructs, namely compensation practice, intrapreneurship, and risk control.
- To conduct a literature review on the agency theory and use it as the theoretical foundation to establish a link between compensation, intrapreneurial behaviour, and risk.
- To combine relevant items from previous research instruments and use them to create reliable scales for the quantitative measurement of compensation practices, intrapreneurial behaviour, and risk control.
- More specifically, to empirically analyze the role of desired compensation practices in elevating employees' intrapreneurial behaviour and how the perception of their department's risk control moderates this relationship.

1.2 Research questions and hypotheses

Based on previous research pertaining to the above-mentioned objectives, the following research questions are raised:

(1) What is the relationship between actual compensation practices and employees' elevated intrapreneurial behaviour?

(2) What is the relationship between desired compensation practices and employees' elevated intrapreneurial behaviour?

(3) Does risk control have an effect on the relationship between desired compensation practices and employees' elevated intrapreneurial behaviour?

From the above questions, the following relevant hypotheses are formulated:

Hypothesis 1 (null): Actual compensation practices are not positively related to employees' elevated intrapreneurial behaviour.

Hypothesis 1 (alternate): Actual compensation practices are positively related to employees' elevated intrapreneurial behaviour.

Hypothesis 2 (null): Desired compensation practices are not positively related to employees' elevated intrapreneurial behaviour. Intrapreneurial employees prefer/desire outcome-based compensation practices which refers to those which are directly linked to success of the intrapreneur's idea/initiative/new venture; for example, options in new venture equity and variable bonuses for milestones achieved.

Hypothesis 2 (alternate): Desired compensation practices are positively related to employees' elevated intrapreneurial behaviour. Intrapreneurial employees prefer/desire outcome-based compensation practices which refers to those which are directly linked to success of the intrapreneur's idea/initiative/new venture; for example, options in new venture equity and variable bonuses for milestones achieved.

Hypothesis 3 (null): Department's risk control does not moderate the relationship between desired compensation practices and employees' elevated intrapreneurial behaviour.

Hypothesis 3 (alternate): Department's risk control moderates the relationship between desired compensation practices and employees' elevated intrapreneurial behaviour.

The variables are defined as follows:

- Actual compensation practices (ACP) = independent variables (IV).
- Desired compensation practices (DCP) = independent variables (IV).

- Employees' elevated intrapreneurial behaviour (EEIB) = dependent variable (DV).
- Department's risk control (DRC) * DCP = interaction variable.

1.3 Context of the study

A wide scope of different disciplines was consulted for the conceptual foundations of this study. This study reflects mostly parts of human resource management and corporate entrepreneurship. Consequently, to reflect suitable subject breadth is quite challenging. Literature in entrepreneurship, human resource management, organizational behaviour, and other fields was investigated for a general overview of concepts, constructs, and operational definitions that were appropriately linked to the study objectives. It is important to base variables on the conceptually and theoretically sound foundations of other disciplines as this helps increase the intellectual legitimacy of entrepreneurship.

Findings regarding the influence of compensation practices on innovative performance have existed for many years (Balkin, Markman, and Gomez-Mejia, 2000; Balkin and Bannister, 1993; Balkin and Gomez-Mejia, 1984). However, most of these studies have focused on compensation availability and not on the specific types of compensation that may better promote innovative performance (Lerner et al, 2009:54). That being the case, this research serves to examine those compensation practices believed to be most relevant in enhancing employee's intrapreneurial behaviour, without situating the study within any specific context that may explain intrapreneurial behaviour. Such contextual factors include the organization's entrepreneurial culture and industry.

This study is situated within the South African private sector or business environment which is the main driver of economic development in the country. In South Africa, the

private sector is dynamic and is predominantly owned by South African citizens whose rights are entrenched constitutionally (Mbeki, 2004). Employees in South Africa's private sector are organized into independent social movements, especially trade unions, which articulate and represent their interests. Central to these interests is the issue of job creation, an expectation to be met by private sector owners as they seek to maximize profit in their various businesses (Mbeki, 2004).

Corporate entrepreneurship literature suggests that employees in organizations doing business in turbulent, hostile, and dynamic environments, will exhibit higher levels of intrapreneurial behaviour than those in more stable environments (Scheepers, Bloom, and Hough, 2008:2). Even though the South African business environment has been characterized by turbulence over the past few decades, South Africa still ranks very low (unweighted average = 1.4) on the established business ownership rate according to the Global Entrepreneurship Monitor report (Bosma and Levie, 2009:21). In addition, between 2004 and 2009, South Africa had one of the lowest "high-growth expectation early-stage entrepreneurship" (Bosma and Levie, 2009:29). On the issue of corporate entrepreneurship, organizations like Discovery South Africa have managed to develop a corporate entrepreneurial culture but this is not yet a common phenomenon within the South African business environment. The organizational dilemma is how to motivate employees to behave intrapreneurially and this research attempts to address this dilemma.

1.4 Problem statement

The main characteristics of intrapreneurial employees include innovation, proactiveness, and risk-taking. Innovation is one of the most widely studied aspects of corporate entrepreneurship from a human resource management perspective. Of all the human resource management practices, the influence of compensation practices on innovative performance has received the most attention (Hayton, 2005;

Balkin et al., 2000). However, in South Africa, organizations find it difficult to motivate their employees to behave intrapreneurially.

1.5 Significance of the study

Although much research has been done regarding the influence of compensation practices on innovative performance, the main focus has been on executives and on compensation availability rather than the desired types of compensation that may better promote innovation (Lerner et al, 2009:54). In addition, the effect of uncertainty on the compensation-innovation relationship has not been clearly addressed (Hayton, 2005:25). Changes in environmental complexity and organizational stability may alter an employee's perception of uncertainty which might impact an employee's involvement in intrapreneurial activities within the organization (Hayton, 2005).

Most studies of the compensation-innovation relationship have been conducted in developed countries like the United States of America. Such studies reveal little knowledge emerging from an efficiency-driven economy like South Africa which shows differences in innovative behaviour, risk profile, compensation practices, and culture (Bosma and Levie, 2009:5). Traditional compensation practices as they exist at present might be insufficient to motivate employees to behave intrapreneurially especially when we take into consideration the degree of uncertainty in the South African work environment and private sector. Therefore, understanding the relationship between compensation practices and employees' intrapreneurial behaviour, and the effect the level of risk has on this relationship is crucial to the long-term promotion of intrapreneurship within South African organizations. This research attempts to fill this gap by examining the types of compensation practices that can more effectively elevate employees' intrapreneurial behaviour within South African organizations. Also, considerations of uncertainty acceptance by employees

will be explored by measuring the moderating effect of department's risk control on the DCP - EEIB relationship.

Furthermore, this study seeks to provide guidance to South African organizations on what compensation practices they can use to elevate their employees' intrapreneurial behaviour. By elevating employees' intrapreneurial behaviour, South African organizations will become more productive and thereby favourably compete with their counterparts in developed countries.

1.6 Definition of terms

The recognition of entrepreneurial activities within existing organizations is rapidly increasing but ambiguities continue to plague attempts to define such activities (Sharma and Chrisman, 1999:13). Some of the terms that have been used to describe corporate entrepreneurship include corporate venturing, strategic renewal, and intrapreneurship. Table 1 presents a list of some existing definitions for corporate entrepreneurship.

Table 1: Existing definitions (Sharma and Chrisman, 1999:14-15)

Author/s and year	Definition suggested
Guth and Ginsberg (1990:5)	Corporate entrepreneurship encompasses two types of phenomena and the processes surrounding them: (1) the birth of new businesses within existing organizations, that is, internal innovation or venturing; and (2) the transformation of organizations through renewal of the key ideas on which they are built, that is, strategic renewal.
Jennings and Lumpkin (1989:489)	Corporate entrepreneurship is defined as the extent to which new products and/or new markets are developed. An organization is entrepreneurial if it develops a higher than average number of new products and/or new markets.

Table 1 continued

Author/s and year	Definition suggested
Zajac, Golden, and Shortell (1991:171)	Internal corporate venturing involves the creation of an internally-staffed venture unit that is semi-autonomous, with the sponsoring organization maintaining ultimate authority.
Pinchot III (1985:ix)	Intrapreneurs are any of the “dreamers who do.” Those who take hands-on responsibility for creating innovation of any kind within an organization.
Nielson, Peters, and Hisrich (1985:181)	Intrapreneurship is the development within a large organization of internal markets and relatively small and independent units designed to create, internally test-market, and expand improved and/or innovative staff services, technologies or practices within the organization. This is different from the large organization entrepreneurship/venture units whose purpose is to develop profitable positions in external markets.
Guth and Ginsburg (1990:6)	Strategic renewal involves the creation of new wealth through new combinations of resources.
Damanpour (1991:556)	Corporate innovation is a very broad concept which includes the generation, development and implementation of new ideas or behaviours. An innovation can be a product or service, an administrative system, or a new plan or program pertaining to organizational members.
Jennings and Young (1990:55)	Corporate entrepreneurship is the process of developing new products or new markets. An organization is entrepreneurial if it develops a higher than average number of new products or new markets within that industry.
Jones and Butler (1992:734)	Internal corporate entrepreneurship refers to entrepreneurial behaviour within one organization.
Hornsby, Naffziger, Kuratko, and Montagno (1993:30)	Venture may be applied to the development of new business endeavours within the corporate framework.

According to the literature, the difference between corporate entrepreneurship and intrapreneurship is just a matter of definition (Jong and Wennekers, 2008). Corporate entrepreneurship is usually defined at the organizational level while intrapreneurship relates to the individual level (Sharma and Chrisman, 1999). To this effect, corporate entrepreneurship is defined as a top-down process (from executives down to the individual employees), while intrapreneurship is a bottom-up process (proactive and innovative initiatives of individual employees to either improve work procedures or explore and exploit business opportunities) (Jong and Wennekers, 2008).

1.7 Assumptions

The following assumptions were made:

- Observations were independent as very few responses came from respondents in the same organization. This is very important because if many respondents originated from the same organization, their responses on compensation practices are likely to be the same and thus will distort the pool of results from other respondents.

- Respondents had enough knowledge in the area of compensation and intrapreneurship to enable them respond to the questions in the questionnaire.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Scholarly literature on compensation, innovation, intrapreneurship, and risk control is substantial. A general literature review on compensation, intrapreneurship, and risk control is offered in this chapter. Since the theoretical foundation of the proposed hypotheses is positioned in the agency theory, a review of some important conceptual issues regarding the agency theory is discussed. Nonetheless, it remains beyond the scope of this section to systematically delineate the entire reach of the agency theory. Other theoretical foundations that will be discussed in this literature review include the resource-based and expectancy theories.

This literature review is divided into four major sections (compensation practices, intrapreneurship, risk control, and theoretical framework and hypotheses development) and a conclusion. The theoretical framework section discusses the resource-based, expectancy, and agency theories. It ends with the statement of the three hypotheses formulated for this research.

2.2 Compensation practices

Compensation practices can be located in the broader field of human resource management practices. Following that idea, this section will begin by reviewing some of the theories about human resource management.

2.2.1 Theory about human resource management

There are three main categories of theories namely strategic, descriptive, and normative (Guest, 1997:264). These theories examine human resource management practices in general.

2.2.1.1 Strategic theories of human resource management

These theories are mainly concerned with the impact of external contingencies on human resource management policy and practice (Guest, 1987). In a way, human resource management becomes the dependent variable. Hendry and Pettigrew (1990:26) classified the main environmental influences on human resource management in order to lay out a perspective on human resource management. They mapped out two contexts (one within the organization and the other in the wider environment) and investigated how these contexts impacted human resource management. There was no specific analysis of any link to performance even though this link was implied. In their view, human resource management is characterized by its closer alignment with business strategy and this view is in opposition with Guest (1987), who believes that the distinctive strategic direction pursued is what distinguishes human resource management and not the adoption of a strategic view. Other studies done in the United States of America support the view of Hendry and Pettigrew (1990) by hypothesizing that organizations with a fit between business strategy and human resource management practices will have superior performance (Guest, 1999).

2.2.1.2 Descriptive theories of human resource management

These theories provide no clear path for any analysis on the relationship between human resource management and performance because they describe the human

resource management field in a broad way (Guest, 1999:265). The best studies in this area attempted to address some interrelationships in the broad field of human resource management. Being too general implies such studies are useful in identifying a range of outcomes of interest to various stakeholders but provide no specific recommendations (Guest, 1999).

2.2.1.3 Normative theories of human resource management

These theories are prescriptive in their approach, meaning there is a sufficient body of knowledge to provide a basis for prescribed best practice. For example, Guest (1987:512) posits that applying an integrated set of human resource management practices with a view to achieving the normative goals of high commitment to the organization will result in higher employee performance. Normative theories focus on the internal characteristics of human resource management to the neglect of broader strategic issues. This is a limitation because in ignoring business strategies and advocating a set of best practices, there is a risk of implying one best way. Another problem is that human resource management goals can be well defined but the list of human resource management practices is not quite clear and awaits more empirical research (Guest, 1997).

Finally, the descriptive and normative theories describe human resource management policy and practice in a way that is potentially helpful for measurement even though they are not sufficient. Therefore a sufficient theoretical basis for classifying human resource management policy and practice is still lacking and this problem is clearly identified in the empirical literature (Guest, 1999). The strategic and descriptive theories suggest that there is a link between human resource management practice and organizational performance. This link is explored in the next section.

2.2.2 Human resource management and performance: Theoretical framework

The strategic and descriptive model suggests that superior performance is likely to be attained when the various human resource management practices are aligned to support each other; the right people will be in the right places doing the right things (Guest, 1997:268). In contrast, the normative theory is rooted in an organization's psychology and is built on lower-range more specific behavioural theories. The assumption is that employees' motivation and commitment are enhanced by "appropriate" human resource management practices. The factors which constitute these appropriate practices stem from specific behavioural theories of organizational commitment, job design, goal setting, and much more. Human resource management provides a coherent integration of these behavioural theories and makes apparent the linkages between human resource management practices and performance (Guest, 1997). Human resource management practices are many and the next section identifies some of these practices and where they are situated in current research.

2.2.3 Human resource management practices

Human resource management practices are valuable to an organization because they help the organization a great deal in accomplishing its objectives. Consequently, an organization should invest in human resource to guarantee increasing success (Kaya, 2006). Previous research has shown that sources of sustainable competitive advantage and internal competitiveness emanate from those resources that are rare, inimitable, and valuable. Human resource is one of such resources (Barney, 1991). Sun, Aryee, and Law (2007:560) classified selective staffing, extensive training, internal mobility, employment security, clear job description, results-oriented appraisal, incentive reward (compensation), and participation as high performance human resource practices. These are coherent practices that improve the skills of the workforce, participation in decision making, and motivate the workforce to put forth discretionary effort. Ultimately, they result in

superior organizational performance in the areas where the workforce has direct control. This best practice approach has dominated research studying the effects of high-performance human resource management practices on organizational performance, but there is recognition that this relationship may be contingent on an organization's contextual condition (Sun et al, 2007).

The high performance human resource management practice in this research is incentive reward or compensation. Properly designed compensation systems promote desirable employee behaviour which is crucial to the successful implementation of business strategies (Yanadori and Marler, 2006:559). Therefore, a good fit between an organization's business strategy and its compensation practices should lead to improved effectiveness in the organization, suggesting that organizations should design compensation systems which suit their business strategies (Yanadori and Marler, 2006). With regards to this study, an organization's strategic intention to promote intrapreneurial behaviour among its employees will succeed only if the compensation practices desired by its employees are implemented and these compensation practices should vary across different industries (Chandler, Keller, and Lyon, 2000).

Yanadori and Marler (2006:559) explored the concept of strategic employee groups. In other words, if some employee groups are strategically more important than others, then organizations may choose to develop compensation systems that consider these differing strategic contributions. For example, some researchers regard research and development employees in high-technology organizations as strategic employee groups because their contributions directly enhance the organization's innovative capabilities (Yanadori and Marler, 2006).

2.2.4 Human resource management and corporate entrepreneurship

Human resource management systems and practices play an important role in the current state of development of corporate entrepreneurship (Edralin, 2010:29). In this

light, Edralin (2010) found that the human resource management practices of recruitment, selection, training and development, compensation, performance management, and employee relations all drive corporate entrepreneurship to an extent, with the latter being the most significant driver of corporate entrepreneurship. Organizations have realized that human capital is a critical resource and so they must partner with their employees to ensure profitability, sustainability, and global competitiveness. Employees who have the ability to pursue value-creating opportunities define whether an organization is entrepreneurial or not. This reliance of an organization's entrepreneurial capabilities on the behaviour of certain employees emphasizes the relevance of human resource management practices to corporate entrepreneurship (Edralin, 2010).

2.2.5 Compensation practices and corporate entrepreneurship

According to Sharma and Chrisman (1999:14), corporate entrepreneurship is the process where an employee or group of employees, in association with an existing organization, create a new business or innovate within that organization. The literature on corporate entrepreneurship reports that compensation practices are one of the vital structural dimensions promoting innovation and corporate entrepreneurship (Gautam and Verma, 1997). This is consistent with results from Chandler et al (2000:61) which suggest that management support and compensation practices promote commitment to innovate on the part of employees. Their argument was based on two premises: compensation practices can either be used as a tool to increase innovative activity or it can discourage innovative activity by rewarding other behaviours. Due to the impact rewards have on intrapreneurial behaviour, they are now seen as part of the organizational environment for fostering corporate entrepreneurship (Hornsby, Kuratko, and Montagno, 1999) and increasing performance by intrapreneurs (Jennings and Lumpkin, 1989).

The need for appropriate incentive plans has been stressed by Lerner et al (2009:54) and this is consistent with Pinchot (1987) who claims that it is necessary to reduce

barriers and increase the compensation for intrapreneurs in order to identify and keep them in the organization. Intrapreneurs desire performance incentives as a form of feedback (Block and Ornati, 1987). Similar results were obtained in small businesses where most intrapreneurs were dissatisfied with the almost total lack of any extrinsic reward acknowledging the value of their contributions (Carrier, 1996). They believed that symbolic recognition was only sufficient in the short run but insufficient in the long run to make intrapreneurs remain committed to their initiatives, particularly considering the attendant risks (Block and Ornati, 1987).

From the above studies, it is clear that there is a broad agreement regarding the role of compensation in corporate entrepreneurship, yet the empirical results are mixed. For example, some studies on the relationship between various types of financial compensation and the intrapreneur's performance did not find a positive relationship between the two (Lerner et al, 2009). Block and Ornati (1987) found no significant difference in performance among organizations that adopted special compensation practices for intrapreneurs while Sathe (1985) found that organizations which provide huge pay incentives are not more successful at motivating their employees to greater levels of intrapreneurship.

Rather, innovative organizations used protection from failure as the primary incentive to motivate their employees to greater levels of intrapreneurship (Jennings and Lumpkin, 1989; Sathe, 1985). Some researchers who examined desired compensation practices, found a positive relationship between equity in the organization or venture and corporate entrepreneurship (Pfeffer and Veiga, 1999; Brazeal, 1993; Zahra, 1991). Brazeal (1993) noted that creativity should be rewarded by both financial and non-financial incentives. However, Rule and Irwin (1988) found that the freedom to implement the entrepreneurial idea was more important than financial rewards.

2.2.6 Compensation in organizations with a research and development laboratory

According to Lerner and Wulf (2007:634), research and development expenditures have long been understood to play a major role in economic growth. In the twentieth century, the central corporate research and development laboratory was a dominant feature of the innovation landscape. These campus-like facilities employed thousands of researchers, many of whom were free to engage in the pursuit of fundamental science with little direct commercial applicability. The most notable of these research facilities included the Bell laboratories and the IBM central research facility. However, due to the disappointing commercial returns of most of these facilities and the intensified competitive pressures that came with them, organizations began to de-emphasize central research facilities in favor of divisional laboratories. Thus, compensation of central research personnel became closely linked to the economic objectives of the organization (Lerner and Wulf, 2007).

Corporate research and development heads have better information regarding a project's potential, so they are charged with the role of allocating funds across the different projects. Such responsibilities present the temptation of making decisions that might increase private benefits at the expense of shareholders, such as funding of "pet projects" (Lerner and Wulf, 2007). In order to mitigate this problem, organizations use mostly long-term compensation (such as restricted stock and stock options) to align the interests of corporate research and development heads with those of shareholders. Lerner and Wulf (2007:641) found that in organizations with a centralized research and development department, long-term compensation granted to corporate research and development heads was positively associated with innovation while little association was found between short-term compensation for corporate research and development heads and innovation. However, this finding was not supported in organizations with decentralized research and development divisions as little association was found between long-term compensation for corporate research and development heads and innovation. One support for this finding is the fact that corporate research and development heads in centralized

organizations (that is, organizations that conduct research only at the corporate level) have more influence over research and development decisions relative to those in decentralized organizations (Lerner and Wulf, 2007).

Some major compensation problems occur in research and development (Zenger and Lazzarini, 2004). Innovation is a process of discovering new combinations of knowledge and the research and development engineer's ability, effort, and knowledge are the necessary inputs in this process. However, organizations face severe problems in contractually obtaining these inputs both before and after hiring. Before hiring, organizations face huge problems in accurately assessing the applicant's capacity to innovate, solve problems, and perform tasks (Zenger and Lazzarini, 2004). Some organizations use indicators like educational achievement and job history to provide valuable correlates of the desired job attributes, but such measures only provide a crude level of sorting. Self-reports are generally unreliable while former employers are unwilling to disclose information about former employees because of potential legal consequences, and that being the case, it is quite difficult to identify which engineers to employ. It is because of such difficulties that employers craft compensation systems that induce talented engineers to self-select to their organizations (Zenger and Lazzarini, 2004:330).

After hiring, the engineers get to work and begin to learn new things while developing ideas and skills that are valuable, both internally and externally (Zenger and Lazzarini, 2004). Retaining these engineers becomes necessary because when they leave for another organization, they take with them such ideas, skills, and whatever they have learned in their current organization. This results in a loss of knowledge assets to their current organization. One way to retain their services is to design and implement optimal compensation systems that can motivate these engineers to remain. However, motivating engineers' effort on the job is quite problematic in itself because research and development engineers are engaged in tasks that are primarily cognitive. In this regard, it is difficult to discern the behaviours that reflect appropriate and high effort. Given such difficulty, employers should

attempt to design and implement compensation systems that induce engineers to choose desired behaviours (Zenger and Lazzarini, 2004).

2.2.7 Compensation and organizational size

Where it is difficult to clearly recognize effort, ability, and knowledge among employees, such as the case of research and development engineers, performance-contingent compensation can be used to lure talent and induce high effort. With such a system, employees take a portion of the performance gains that can arise from greater effort, ability, and knowledge (Zenger and Lazzarini, 2004:331). This implies that as links between pay and performance increase, the incentives in luring ability and inducing greater effort become more effective; higher levels of incentive intensity increase the marginal gains from greater effort.

In addition, the most valuable employees usually prefer contracts that aggressively reward contributions to performance (Zenger and Lazzarini, 2004). Aggressive performance-based contracts offer higher returns in comparison to contracts that pay a fixed amount reflecting some average level of performance .Therefore organizations that want top talent should increase incentive intensity in order to lure top talent from organizations that weakly reward performance. However, increasing incentive intensity is not simple. Some factors like the accuracy of performance measures and the control employees have over performance measures influence the intensity with which pay and performance are linked. While accurate performance measures minimize the measurement risk imposed by rewarding performance, they also impose risk on employees if factors beyond their control also alter performance. Thus, the optimal level of incentive intensity is influenced by the effectiveness with which agents control performance measures (Zenger and Lazzarini, 2004). Consistent with this logic, Zenger and Marshall (2000) found stronger links between pay and performance in organizations where there was a close link between easily measured outputs and individual actions.

An organization's size also plays a role in incentive intensity. Small organizations grant some advantages in providing highly incentive-intensive compensation because they are able to offer higher-powered incentives merely by rewarding individuals for performing well (Zenger and Lazzarini, 2004). When compared to large organizations, fewer employees influence the performance of research and development in small organizations. This means that the performance of the entire research and development group is a performance indicator over which each employee has some reasonable amount of control. Such influence over performance measures enables small organizations to design and implement incentive-intensive rewards based simply on organizational performance. It is unreasonable to use this approach in a large organization but in a small organization of around 10 employees, such reward schemes are both effective and common place (Zenger and Lazzarini, 2004:331). Zenger and Lazzarini (2004) found that in compensating engineers, small organizations had a larger percentage of pay contingent on organizational performance.

Another attribute of small organizations is that it is easier to recognize and reward individual differences that contribute to organizational performance. Thus, it is less costly to measure these individual contributions in smaller organizations than larger ones (Zenger and Lazzarini, 2004:331). Regarding performance assessments, small organizations have yet another important advantage over large ones. As performance assessments pass up the hierarchy, multiple layers of managers have incentives to potentially manipulate them and their accompanying reward allocations. Disputes usually arise among managers regarding the amount of pay increases they are willing to grant their subordinates. In small organizations, individual evaluations by senior managers are undistorted as there are no middle managers to manipulate them (Zenger and Lazzarini, 2004).

In addition, Zenger and Marshall (2000:153) suggests that fairness considerations and comparison processes greatly constrain management's ability to aggressively reward individual and group performance in large organizations. Employees usually compare their pay and if they perceive inequity, they become de-motivated and

dissatisfied. This can lead to reduced effort and low turnover for the organization (Zenger and Lazzarini, 2004). Also, some employees have perceptions of their own performance that are quite exaggerated. Such exaggerated self-perceptions can lead to employees' perceptions of inequity when organizations attempt to aggressively reward performance. As such, it is important to establish performance levels with a high degree of reliability and validity. Given the strong demand for fairness, large perceptual biases, and tendencies for inaccurate performance measurements, it becomes problematic to implement differential rewards based on performance (Zenger and Lazzarini, 2004).

Sometimes management may attempt to justify differences in performance assessment and pay in order to avoid the consequences of reduced effort and low turnover. Such justification attempts are costly and unlikely to succeed (Zenger and Lazarrini, 2004). According to Zenger and Marshall (2000:153), the level of these comparison costs may be directly linked to an organization's size. For example, if an employee in a large organization is aggressively rewarded by management for positive contribution, a large number of other employees are likely to see this as inequitable leading to costs such as reduced morale, departure, reduced effort, and justification attempts by management.

The magnitude of these costs depends on the number of employees who hear about individually differentiated reward allocations and thus, in a small organization, the negative fallout of any given perceived inequity is greatly reduced (Zenger and Lazzarini, 2004). Also, employees in small organizations can directly observe their colleague's performance, and thus performance differences among them are more likely to be shared knowledge. In large organizations on the other hand, employees often rely on evaluations made by management in comparing the performance of their colleagues. Therefore, relative to large organizations, small organizations have a higher level of measurement accuracy, greater control over performance measures, and reduced comparison problems which enable them to aggressively reward individual contributions to performance and correlates of performance. This is consistent with Zenger and Lazzarini (2004) who reported that small organizations

offer employment contracts that more aggressively reward individual contributions to performance and correlates of performance.

Due to low level of measurement accuracy, lesser control over performance measures and increased comparison problems, large organizations often search for other pay mechanisms. According to Brown (1990), large organizations are more likely to implement merit pay systems than small organizations because in such systems, subjective merit ratings are linked to yearly increases in salary, and not the salary level itself. A typical merit pay system uses a rating scale in which employees are assigned five to seven performance categories which determine a range of acceptable yearly compensation increases. Job grade and the elapsed time within the job grade determine the magnitude of the assigned yearly increases within rating categories (Zenger and Lazzarini, 2004).

Such systems are designed to promote consistency among employees because in theory, those of equal performance receive common ratings regardless of their supervisor (Zenger and Lazzarini, 2004). In practice, it is difficult to individually differentiate performance or justify performance differences and this leads to very limited pay variance, except for extreme performers. Most employees fall in the one to two merit rating categories with corresponding little performance-based pay variance while few employees who are rated in the extreme high category receive significantly higher yearly increases (mostly through promotion). This limited pay variance renders seniority the main determinant of pay in large organizations with merit pay systems as supported by Zenger and Lazzarini (2004:339) who found that large organizations are more likely to use formal merit pay systems that aggressively reward seniority. However, this does not mean that high performers are happy with merit pay systems. In general, merit pay systems do not lure or induce high performers to perform. All the same, it is an approach that is procedurally fair with little opportunity to dispute pay, since seniority can be observed and measured easily (Zenger and Lazzarini, 2004).

2.2.8 Compensation and organizational culture

Beyond their impact on current employees, compensation systems are thought to convey essential messages about an organization's culture, values, and practices to both current employees and potential hires (Kuhn, 2009:1634). The most obvious link between pay system practice and organizational culture is performance-based pay. Such systems are mostly based on evaluations of individual performance, but rewards can also be determined at the level of the group. This is consistent with previous research findings on compensation practices which noted that most employees preferred their pay to be based on individual rather than group performance (Kuhn, 2009).

According to findings from Kuhn and Yockey (2003), college students in the United States of America were more likely to choose performance-based pay over a fixed salary when income was based on individual performance rather than group performance. This finding, however, does not indicate whether different types of pay-for-performance plans may influence an applicant's attraction via effects on perceptions of organizational culture. Kuhn (2009) used the cultural constructs individualism and collectivism, to provide a meaningful way to conceptualize organizational cultures. While collectivism is assessed by attributes like shared decision making and the perception that the organization takes care of its employees, individualism is associated with the perception that workers are encouraged to recognize their unique potential and that inter-employee competition is accepted. Kuhn (2009) found that, in a recruiting advertisement, describing bonus as being based on individual outcomes led to the organization's culture being perceived as relatively more individualistic.

Another aspect of organizational culture deals with compensation systems and person-organization fit (Kuhn, 2009). Most researchers studying this phenomenon have used a needs-supplies approach that assesses the match between individual preferences and needs with the pay system. For example, Turban and Keon (1993)

studied pay raises with attention to seniority and individual performance in which they found that employees were attracted to pay raises based on individual performance than those based on seniority. This effect was moderated by the respondent's need for achievement.

2.2.9 Executive compensation and innovation strategy

The recent global and economic conditions have resulted in an increased need for organizations to focus on all organizational aspects necessary for effective strategy implementation (Wheatley and Doty, 2010:89). In the literature on strategy, organizations that establish a good fit between organizational attributes and their strategy are in a better position to implement that strategy and have performance advantages as well (Lerner and Wulf, 2007; Yanadori and Marler, 2006). In the current business world, environmental uncertainty is a common phenomenon and most organizations use increased innovation as one of the ways to compete within the competitive landscape (Damanpour, 1991).

According to Wheatley and Doty (2010), a defining component of an innovation strategy is the organization's spending on research and development because, decisions about research and development spending are directly related to the implementation of an innovation strategy. In addition, executive compensation policies are likely to have a huge impact on the organization's research and development spending because, research and development spending is under the direct control of the chief executive officer and top management team (Wheatley and Doty, 2010).

Decisions about research and development spending incorporate (either explicitly or implicitly) statements concerning risk preferences and organizational time horizons. These two interdependent constructs, as shown in the Table 2, represent many of the important differences between various forms of compensation.

Table 2: Compensation time horizon and risk relationship (Wheatley and Doty, 2010:91)

	Low Risk	*High Risk*
Short-Term	Q1 Base	Q2 Bonus
Long-Term	Q3 Options	Q4 Stock

Wheatley and Doty (2010) suggested that risk plays a crucial role in the compensation-performance relationship; if executives are not afraid of losing compensation based on performance, they may take on additional strategy risk. However, if their compensation is tied directly to organizational performance and a loss of compensation is possible, they are more likely to implement a less risky strategy.

Base compensation is the basic cash that an employer provides for work performed and it is represented in the first quadrant as low risk, short-term (Table 2). Due to this low compensation risk, executives will be motivated to implement a higher-risk innovation strategy because of the potential of a high return in conformity with the high risk/high return definition of innovation strategy (Wheatley and Doty, 2010). Bonus is considered high-risk, short-term (second quadrant) because it ties compensation to short-term success. In order to capitalize on the bonus pay component, top management needs to meet specific short-term performance standards. Compared with base compensation, bonus has a higher risk in implementing a high-risk innovation strategy. This is because implementing an innovation strategy is a long-term endeavor. Thus, a short-term, results-based bonus will discourage executives from taking the long-term risk involved with innovation strategy (Wheatley and Doty, 2010).

Options compensation, which is low-risk and long-term (third quadrant) is the most flexible for executives because an executive can choose between exercising and not

exercising the option. If the innovation is not successful, the strategic leadership can choose not to exercise the option and wait until the organization moves into a more favorable position. Such flexibility encourages risk-taking by top management and mitigates the inherent risk of an innovation strategy. The fourth quadrant represents stock compensation which is high-risk and long-term (Wheatley and Doty, 2010).

According to Beatty and Zajac (1994:330), increases in compensation risk leads to increases in top management's risk aversion. Implementing a high risk innovation strategy under such circumstances is a less likely event. With stocks, a specified level of performance is defined and if the strategic leadership meets or exceeds the target, they are compensated (this is similar to bonus compensation). One major difference between stock and options is downside risk (Wheatley and Doty, 2010). Downside risk is always present with stocks because if the organization's stock begins to fall, the strategic leadership has no way of changing their compensation, unlike options where they could decide not to exercise the option. Thus, stock carries the most risk for executives involved with implementing a long-term innovation strategy (Wheatley and Doty, 2010).

Stock compensation is mostly used to align the interests of top management with those of shareholders. Top management's fear of negatively affecting present shareholder value will deter them from taking what they perceive to be high-risk actions. Wheatley and Doty (2010) examined the importance of executive compensation (base, bonus, options, and stock compensation) for organizations implementing an innovation strategy. They found that bonus and options compensation moderated the innovation strategy-organizational performance relationship. More specifically, short- and long-term compensation had different driving mechanisms in the organization's decision-making with regard to strategy implementation. In today's organizations, pay-for-performance is very prevalent. Consistent with this practice, Wheatley and Doty (2010) found that high-percent bonus compensation (short-term) enhanced performance levels irrespective of the strategy risk involved. With respect to long-term compensation, their findings suggest that compensation can be tied directly to performance if low-risk strategies are being

implemented. Conversely, if high-risk strategies are being implemented, compensation should not be tied directly to performance (Wheatley and Doty, 2010).

2.3 Intrapreneurship

One of the ways to foster growth in a large or small business is to allow employees to introduce and implement innovation in the organization (Amo and Kolvereid, 2005:7). According to Pinchot and Pellman (1999), intrapreneurs are employees who turn ideas into realities in an organization. Kuratko, Montagno, and Hornsby (1990) define intrapreneurship as an independent strategic behaviour by employees to exploit a given business opportunity. Carrier (1996) suggests that intrapreneurship and corporate entrepreneurship can be used as a method to stimulate innovation and utilize the creative energy of employees. Nonetheless, according to Hornsby, Kuratko, and Zahra (2002), there is still much to be learned about the substance and process of intrapreneurship.

Innovation behaviour can be conceptualized as an initiative from employees concerning the introduction of new processes, new products, or new markets into an organization (Amo and Kolvereid, 2005). Even though there is a slight difference in the meaning of the terms corporate entrepreneurship and intrapreneurship, their desired result is innovation behaviour among employees (Amo and Kolvereid, 2005). Intrapreneurship is different from entrepreneurship in that while entrepreneurs innovate for themselves, intrapreneurs innovate on behalf of an existing organization (Carrier, 1996).

2.3.1 The concept of corporate entrepreneurship

The concept of corporate entrepreneurship has also been described in the literature as corporate venturing or intrapreneurship (Brizek and Khan, 2008). Jennings and Young (1990) conceptualized corporate entrepreneurship as entrepreneurial efforts which require an organization's sanctions and resources for the purpose of carrying out innovative activities. Innovation is not possible without knowledge and therefore this view is also consistent with Floyd and Wooldridge (1999:132) who points out that corporate entrepreneurship relies on an organization's ability to learn by exploring new knowledge and exploiting existing knowledge. Such learning processes are dependent upon an organization's human and social capital (Nahapiet and Ghoshal, 1998) or an organization's strategic orientation through the regeneration of products, processes, and services (Covin and Miles, 1999).

Corporate entrepreneurship has also been defined as a process of organizational renewal (Sathe, 1985) or as the ability to generate, develop, and implement new ideas through corporate innovation (Damanpour, 1991). Broadly speaking, entrepreneurship involves innovation which eventually triggers an entrepreneurial event (Bygrave, 1993) and this can occur within an organization or in a start-up context. Therefore, the context of entrepreneurship as an organizational phenomenon needs attention in order to generate consistency in methodology and findings. In an attempt to fulfill this goal, entrepreneurial activity based on activities pursued independently is called "independent entrepreneurship" while entrepreneurial activity based on activities pursued within an organization is called "corporate entrepreneurship" (Sharma and Chrisman, 1999).

Two distinctive and separate arenas comprise corporate entrepreneurship. They include corporate venturing (Zajac, Golden, and Shortell 1990) and strategic renewal (Guth and Ginsberg, 1990). The activities associated with both types refer to an organization's efforts to revitalize, renew, or transform its strategy and structure, all in a bid to improve its performance. Sustained regeneration, where an organization

introduces a new product or enters a new but existing market, has also been coined as one form of corporate entrepreneurship (Covin and Miles, 1999).

2.3.2 Corporate entrepreneurship and the corporate entrepreneur

Corporate entrepreneurship focuses on how companies stimulate innovation, enterprise, and initiative from their employees and the subsequent contribution of individual behaviour to organizational success (Amo and Kolvereid, 2005). Hornsby et al (2002) regard corporate entrepreneurship as a strategy for the development and implementation of new ideas while Dess, Lumpkin, and McGee (1999) define corporate entrepreneurship as the transformation of organizations through strategic renewal. These definitions shows one of the interesting themes in corporate entrepreneurship research – how strategy should be designed in order to fit the organization's present needs and future visions (Amo and Kolvereid, 2005:9). Amo and Kolvereid (2005) found that a strategic orientation toward corporate entrepreneurship was significantly positively related to innovation behaviour, supporting the notion that organizations should put a corporate entrepreneurship strategy in place in order to promote innovation behaviour among their employees. Corporate entrepreneurship is initiated from the top. Thus, top management is delegated to give name and content to the initiative and assign members, responsibilities, and resources to the group (Amo and Kolvereid, 2002).

Kanter (1984) found that the environment, rather than the individual determines an employee's involvement in innovative activity. She suggests that an organizational environment which stimulates employees to act is an environment which gives them the power to act. The degree to which the opportunity to use power is given or withheld from employees is one characteristic difference between organizations which stagnate and those which innovate (Kanter, 1984). In other words, companies which encourage innovation provide the freedom to act which arouses the desire to act. What matters to the potential corporate entrepreneur is how he or she perceives the organization's ability to encourage innovation. Most corporate entrepreneurs

have the ability to exercise skills in obtaining and using power in order to accomplish innovation (Amo and Kolvereid, 2005).

While corporate entrepreneurs can find opportunities to innovate in almost any setting, more opportunities abound in specific domains that depend on the organization and its industry. The highest number of corporate entrepreneurial accomplishments are found in organizations that are least segmented or organizations that have integrative structures (Amo and Kolvereid, 2002:5). According to Kanter (1984), individual employees only take the initiative to innovate when the organization's environment supports innovation. Green, Brush, and Hart (1999) use a resource based approach to describe the corporate entrepreneur. They suggest that the corporate entrepreneur use his or her personal human and social resources to discover new business opportunities while leveraging support for the corporate entrepreneurial initiative. Kanter (1984) noted that the corporate entrepreneur is mostly a middle level manager and is found in every function.

2.3.3 Intrapreneurship and the intrapreneur

The literature on intrapreneurship focuses more on independent initiatives as intrapreneurs initiate the implementation of their innovations in a bottom-up way. Their innovations might not even be wanted by management initially (Carrrier, 1996). Intrapreneurs perform their roles and seek the corporation's blessing for their tasks afterwards (Pinchot and Pellman, 1999). An interesting research theme in the intrapreneurship literature examines how intrapreneurs overcome the resistance to their ideas from the surroundings. They gather resources from wherever they can and sponsors allocate resources based on both the intrapreneurial team's eagerness and the sponsor's faith in the intrapreneurial team (Pinchot and Pellman, 1999).

An intrapreneur selects members for the intrapreneurial team according to their complementing knowledge base and their devotion to his/her vision. It is important

for the team to have a shared vision as it guides the activities of the team. Pinchot and Pellman (1999) suggest that every employee is capable of creativity. Thus, the shortage of intrapreneurs is mostly due to the lack of sponsors to protect and encourage intrapreneurs. While the intrapreneur is buried within nearly every employee, in most cases some training is needed to enable the employee to understand all the areas involved in conceiving, launching, and running a business. It is crucial to have experience, skills, or talents that are necessary to carry the intrapreneurial idea forward (Amo and Kolvereid, 2002:6).

Intrapreneurs can learn from their failures and successes and use these experiences in their next intrapreneurial work. According to Pinchot (1985), there is no formula for determining who can become an intrapreneur – employees become intrapreneurs when circumstances drive them to take initiative. Intrapreneurs tend to be young and highly educated. In addition, they are self-appointed to their tasks and are self-determined goal setters who often take initiative to do things no one asked them to do (Pinchot 1985). Previous work experience and educational background of the intrapreneurs, as well as transferring employees across various organizational departments, promotes intrapreneurship as potential intrapreneurs gain the ability to see a problem more holistically (Amo and Kolvereid, 2002).

2.3.4 Proactivity

Most organizations do not assess the personality qualities of either current or potential employees and it is important to recognize the influence individual differences have on innovative behaviour (Hornsby et al, 1993). Innovation behaviour in organizations is mostly due to initiatives from employees with an intrapreneurial personality.

According to Kanter (1984), intrapreneurship often involves collective work. Nevertheless, an organization needs employees who are willing to go their own way

and follow their own intuition. This observation is supported by Morris, Davis, and Allen (1994) who suggest that some parts of the intrapreneurial process could benefit from an individual leading and giving directions. To the individual, personality provides meaning, direction, and mobilization. Utsch, Rauch, Rothfufs, and Frese (1997) studied the differences between small scale entrepreneurs and managers in East-Germany and found that the differences were highest in need for achievement, self-efficacy, and control rejection. No difference in proactiveness was found between these two groups and the scholars just mentioned above claim the reason for this was because they did not operationalize proactivity well enough.

According to Becherer and Mauer (1999), the definitions of proactivity and intrapreneurship have some parallels. Intrapreneurs are adept at getting others to agree to their private vision and they work within and around the system to accomplish their vision. This fits with proactive behaviour as it identifies individual differences among people to the extent in which they take action to influence their environments. Proactivity personality disposition was previously found to be related to entrepreneurial behaviour among small organization presidents (Becherer and Mauer, 1999).

Jennings, Cox, and Cooper (1994) did a case-based investigation of differences and similarities between elite entrepreneurs and elite intrapreneurs and found that all their interviewees were highly proactive and responded to challenge. Antoncic and Hisrich (2000) measured proactivity as top managers' orientation in pursuing enhanced competitiveness and found that proactivity was an important aspect of intrapreneurship at an organizational level of analysis. Amo and Kolvereid (2002:9) used the Proactivity Personality Scale to examine whether there was a relationship between an individual's disposition toward proactive behaviour and intrapreneurship. The result indicated that proactive personality disposition was related to intrapreneurship but its influence was not as strong as the organization's influence on intrapreneurship. This suggests that an organization's strategy for intrapreneurship is also an important factor to consider. In support of this notion, Amo and Kolvereid (2005) found a significantly positive relationship between

intrapreneurial personality and innovation behaviour in organizations. Additionally, a model that combines strategic orientation toward corporate entrepreneurship and intrapreneurial intensity was found to promote innovation behaviour more than intrapreneurial personality as a standalone. This finding is further supported by Campbell (2000) who found that having employees with intrapreneurial personalities was pointless or even counterproductive unless a strategic orientation towards corporate entrepreneurship was in place.

Another important suggestion from Amo and Kolvereid (2002) is that an employee's position could influence the level of intrapreneurship that the employee engages in. Kanter (1984) points out that freedom to act is one of the major factors that encourage the employee to contribute to innovation in the organization. The position held in the organization determines which empowerment level the employee has. Following this idea, senior management is more involved in intrapreneurship than middle management and middle management is more involved in intrapreneurship than junior management (Amo and Kolvereid, 2002).

2.3.5 Manager's emotions and intrapreneurship

Recent scholars have argued that manager's emotions and their displays impact subordinate behaviour (Brundin, Patzelt, and Shepherd, 2008:222). Emotional displays to others are often involved in social interaction between individuals and can have a significant impact on other's behaviour. Thus, emotional displays of managers as they interact with employees influence the behaviour of the latter. Emotional display can be defined as an observable change in the face, voice, and activity level as perceived to reflect the observed individual's underlying emotions. Managers have the central task to motivate employees to behave in the interest of the organization. This means managers need to display the appropriate emotions depending on the actions they want employees to perform (Brundin et al, 2008).

According to findings from Newcombe and Ashkanasy (2002), a manager's facial expression can have stronger effects on an employee's rating of the manager's leadership than the objective content of the delivered message. In addition, Pugh (2001) has shown that the emotional signal displayed by a sender can impact the receiver's behaviour by changing his or her emotional state. However, displayed emotions do not always reflect the "real" emotions of the sender. For managers, this distinction provides the opportunity to display only those emotions which will make employees perform in line with organizational goals (Brundin et al, 2008). Basically, managers need to have the ability to control their emotions such that only those emotions which suit their purpose are displayed. Such ability reflects the manager's emotional intelligence (Mayer and Salovey, 1997).

The impact of specific emotional displays on the receiver depends on the expectations he or she has about the sender. For example, service personnel show a friendly smile and good cheer to a customer while undertakers send a signal expressing sadness to a mourning person (Brundin et al, 2008:225). Sometimes, expectations of roles and expressed emotions may even vary within individuals as can be seen in the case of surgical nurses. They display little or neutral emotions in the operating room but warm and friendly feelings when dealing with patients and their relatives. Managers are supposed to act as motivators of entrepreneurial action among employees and their emotional displays can either enhance or diminish the willingness of employees to act intrapreneurially (Brundin et al, 2008).

It is important to enhance employees' willingness to act intrapreneurially as this is essential for any organization to create new knowledge and transform it into marketable products and services (Shane and Venkataraman, 2000). This is crucial for many organizations as they operate in the hyper-competitive landscape of the 21st century. In addition, responding to certain environmental conditions such as hostility and dynamism requires that organizations pursue an intrapreneurial strategy and engage in corporate entrepreneurship. Having employees with an entrepreneurial mindset enables the organization to identify new, uncertain, and high potential business opportunities.

A number of factors that can influence an individual's willingness to act entrepreneurially have been described in the literature on emotional motivation. Some of these include the individual's propensity to take risks, goal setting, and drive (Shane, Locke, and Collins, 2003). Brundin et al (2008) propose that a manager's displayed emotions about an entrepreneurial project provide certain signals to employees that influence the employee's perception of risk/uncertainty and the effort they are willing to invest. Furthermore, emotions can be contagious; hence managers' displayed emotions might motivate employees by influencing their emotional state.

Brundin et al (2008) found that a manager's display of confidence and satisfaction about an entrepreneurial project increased an employee's willingness to act entrepreneurially, while a manager's display of frustration, worry, and bewilderment decreased an employee's willingness to act entrepreneurially. In addition, they found that displayed satisfaction enhanced the positive relationship between manager's displayed confidence and the employee's willingness to act, while manager's display of worry and bewilderment diminished this relationship.

2.3.6 Antecedents of intrapreneurship

Two main antecedents have been identified in the literature on intrapreneurship: the external environment of the organization and the characteristics of the organization (Antoncic, 2007).

Some researchers have viewed the external environment as a determinant of entrepreneurial activity at the organizational level (Covin and Slevin, 1991; Zahra, 1991:262). Environmental characteristics like dynamism, technological opportunities, industry growth, and demand for new products are viewed as favorable for intrapreneurship whereas characteristics like unfavorable change and competitive rivalry are viewed as hostile (unfavorable). Environmental hostility can create threats

for the organization and thus stimulating the pursuit of intrapreneurship (Zahra, 1991:263). Dynamism is the perceived volatility and continuing changes in the organization's market. It is favorable to the pursuit of intrapreneurship because it tends to create opportunities in the organization's markets. Organizations operating in a high technological environment tend to adopt an entrepreneurial posture and the perception of growth markets can also pull organizations into increased intrapreneurial activities (Antoncic, 2007). Increased demand for new products creates an important demand-pull which can encourage intrapreneurship within the organization. Antoncic (2007) found that intrapreneurship in established organizations was positively impacted by environmental characteristics (increased dynamism, increased technological opportunities, industry growth, increased demand for new products, unfavorability of change, and increased competitive rivalry).

Some characteristics of intra-organizational environments can serve as stimulants or impediments to intrapreneurship development (Antoncic and Hisrich, 2000; Pinchot, 1985; Kanter, 1984). These intra-organizational characteristics include communication openness, control mechanisms, environmental scanning intensity, organizational values, and management support (Antoncic, 2007). Communication openness refers to information quality, quantity, and sharing. Open communication can also be used as a means to empower employees. Information sharing and empowerment are essential elements for innovation (Pinchot, 1985; Kanter, 1984), whereas information quality and quantity can be critical for successful intrapreneurial initiation and implementation (Zahra, 1991).

Formal controls, when used in moderation to monitor intrapreneurial activities, can lead to positive outcomes for intrapreneurship (Antoncic, 2007). Intensive environmental scanning can highlight industry trends, external threats, and opportunities which are all important for intrapreneurial activities such as innovativeness and new business venturing (Zahra, 1991). For companies in hostile environments, scanning aimed at forecasting the industry environment can be very important. Organizational support may be considered the most crucial antecedent of

intrapreneurship (Antoncic and Hisrich, 2003; Antoncic and Hisrich, 2000). Organizations can support their employees through training programs and such support can usually improve organizational performance. Other types of organizational support include top management support, management involvement, commitment, style, staffing, work discretion, time availability, loose intra-organizational boundaries, and rewards for new venture activities (Antoncic, 2007).

In addition, Kanter (1984) suggests that a combination of emotional and value commitment can improve the level of innovativeness in organizations. Values are an important component of an innovative organizational culture, in which employees are continuously encouraged to generate new ideas, knowledge, and solutions (Wong, 2005). According to Guth and Ginsberg (1990), values-related drivers of intrapreneurship include the characteristics, beliefs, and visions of strategic leaders. Organizational values can be individual-centered (focus on how employees are treated in the organization) or competition-centered (focus on approaches organizational members should follow when attempting to achieve organizational goals) (Zahra, 1991). Antoncic (2007) found that organizational characteristics (communication amount and quality, formal controls, environmental scanning intensity, organizational support, competition-related, and person-related organizational values) had a positive impact on intrapreneurship.

2.4 Risk control

On the surface, risk control and corporate entrepreneurship may seem to be at odds. While corporate entrepreneurship is aimed at taking the organization in new directions, risk control is aimed at channeling and often restricting actions (Goodale, Kuratko, Hornsby, and Covin, 2010:1). An organization's control for risk would seem to be a deterrent to the freedoms needed to successfully promote innovation behaviour within the organization; after all, risk control exists to counteract the adverse effects of uncertainty on the organizational system while ensuring the

conformity to established routines. Without risk control and other operations control mechanisms, organizations that manifest corporate entrepreneurship may tend to generate a disjointed mass of interesting but unrelated opportunities that may have profit potential, but do not move the organization toward a desirable future (Goodale et al, 2010). Contrary to this view, Gilley, Walters, and Olson (2002) found that risk-taking had a positive effect on organizational performance.

Implementing a corporate entrepreneurship strategy in an organization is quite challenging due to the failure to appreciate how risk control and other operations control variables work in conjunction with organizational antecedents of corporate entrepreneurship to facilitate innovation performance (Goodale et al, 2010). However, if innovation-focused controls are enacted by management at the strategy levels of the organization, the positive impact that entrepreneurial activity has on organizational performance may be suppressed. This is because such controls often lead to centralization of organizational structure and decision-making, hence limiting the latitude of action available to lower-level organizational members (Goodale et al, 2010). Consistent with Morris, Allen, Schindehutte, and Avila (2006), the restriction of the number of entrepreneurial opportunities recognized and pursued may limit the capability of the organization to achieve its innovation objectives because the best opportunities may be systematically removed by the elements of organizational structure which limit individual discretion.

The flip side of the coin is the decentralization of operational control mechanisms which will reduce the risk premiums of outcome–based incentives by helping to establish clear organizational boundaries for innovation behaviour and appropriately administering incentives that will promote the long-term innovation interests of the organization (Goodale et al, 2010). Such decentralization places the responsibility for action at the level of the individual employee and those employees on the front line of innovation are often most knowledgeable about where the organization's most attractive entrepreneurial opportunities lie and how they might be pursued. Innovation-focused controls designed and administered this way grant greater discretionary power to these potential intrapreneurs.

2.4.1 Risk control and corporate entrepreneurship

The pursuit of innovative initiatives often involves an exposure to the possibility of outcomes involving loss (Goodale et al, 2010). Operational risk has been examined in a variety of ways in the literature (Goodale et al, 2010; Ellis, Henry, and Shockley, 2010; Weiss and Maher, 2009). It has been demonstrated that organizations generally control risk through an emphasis on marketing tried-and-true products and services, adopting a “wait-and-see” posture when immediate actions are not demanded, and choosing to incrementally deviate from past behaviour when new circumstances are encountered.

Operations management research has often suggested that control systems can be instrumental to the successful introduction of new products and technologies (Das and Joshi, 2007, Naveh, 2007). Goodale et al (2010) studied the relationship between certain organizational antecedents and innovation performance and found that organizational boundaries and management support were positively related to innovation performance. The relationship between management support and innovation performance was found to be more positive under low than high levels of risk control. This is consistent with Zwikael and Sadeh (2007), who suggest that management endorsement of innovative initiatives can be a hurdle and thus any imposition of additional constraints via risk control may only serve to hamper success.

Goodale et al (2010) also found that the relationship between organizational boundaries and innovation performance was more positive under high than low levels of risk control. This finding is contrary to that involving management support and thus suggests that individual operations control variables can have a diversity of effects on the organizational antecedents that promote innovation performance. Monsen, Patzelt, and Saxton (2009) used a conjoint field experiment to collect data and test how risk moderated an employee’s decision to participate in a new corporate venture. They found that job and pay risk negatively moderated the

positive relationship between profit-sharing bonus and an individual employee's likelihood to participate in a new corporate venture such that this relationship was less positive when job risk and pay risk were high than when they were low.

2.4.2 Risk control and compensation

Reward systems that encourage innovation and risk-taking have been shown to have a strong effect on an employee's tendency to behave intrapreneurially (Block and Ornati, 1987:44). Kuratko et al (1990) identified reward and resource availability as a principal determinant of intrapreneurial behaviour by middle and first-level managers and a similar finding was reported in Hornsby et al (2002). Contrary to these findings, Goodale et al (2010) found no positive relationship between rewards/reinforcements and innovation performance in the data used for their study.

The presence of incentives for innovative initiatives may best promote innovation performance when risk controls are emphasized. Innovative behaviours that are both rewarded and have been subjected to careful risk evaluation will likely gain higher ground within the organization. Such rewards will support innovative initiatives that have been carefully judged to have an acceptable risk-return probability, the combination of which will likely result in high innovation performance outcomes. However, Goodale et al (2010) found no support for the notion that high levels of risk control make the relationship between rewards/reinforcements and innovation performance more positive.

2.5 Theoretical framework and hypotheses development

A general literature review on compensation, intrapreneurship, and risk control has been discussed above. The theoretical foundation of the proposed hypotheses is

positioned in the agency theory; hence a review of some important conceptual issues regarding the agency theory is now discussed. Nonetheless, it remains beyond the scope of this section to systematically delineate the entire reach of the agency theory. Other theoretical foundations that will be discussed in this section include the resource-based and expectancy theories.

2.5.1 Resource-based theory

The resource-based theory postulates that organizations are heterogeneous in terms of the resources they control and these resources include all the assets, capabilities, attributes, and knowledge an organization possesses which enable it to develop and implement strategies that improve its performance. Such resources are valuable, rare, difficult to imitate, and have qualities that make them irreplaceable (Barney, 1991). An organization's resources can be a source of sustainable competitive advantage when it becomes difficult for the organization's competitors to obtain the same resources. Similarly, scarce resources create entry barriers for organizations that do not have them (Balkin et al, 2000). For example, a pharmaceutical organization that produces a new medication that is better than others in treating a serious illness will patent the medication and take legal action against those who infringe on the patent, thereby establishing entry barriers that make it more difficult for others to imitate the medication until the patent expires. This patent and the capability to make other innovative medications are examples of resources that may provide a competitive advantage to the organization.

We live in a time where the external environment organizations operate in is facing great turbulence and therefore it is not enough to conduct business in a non-aggressive manner (Morris, Kuratko, and Covin, 2008). Organizations that have the capability to innovate can be expected to generate greater profits than those that are non-innovators. Since success of compensation practices promotes innovative behaviour among employees, it becomes imperative for an organization to use its compensation practices as one of the tools to sustain its capability to innovate. Consequently, one will expect that organizations should link their compensation

practices to evidence of employees' efforts to innovate. At the same time that employees should be more compensated as their innovative efforts increase, it seems logical that as productivity from such innovative efforts increases, there should also be a matching increase in their compensation (Barney, 1991).

Even though resource heterogeneity is the most basic condition of resource-based theory, it is not enough for sustainable advantage. For instance, if an organization has heterogeneous assets which can be easily imitated, such assets will only generate a short-term advantage (Alvarez and Busenitz, 2001). Thus, the other conditions suggested by the resource-based theory are important as well. Heterogeneous resources are a basic condition of entrepreneurship but the process by which these resources are discovered, turned from inputs into heterogeneous outputs, and exploited to extract greater profits, have been given little attention in the literature on strategy. Alvarez and Busenitz (2001:757) argue that entrepreneurship involves cognition, discovery, pursuing market opportunities, and coordinating knowledge that leads to heterogeneous outputs.

2.5.1.1 Cognition in entrepreneurship

Entrepreneurs are probably the most heterogeneous group in the population and they have been discussed more than any other group in the literature (Alvarez and Busenitz, 2001). An important area of discussion has focussed on their cognitive approaches which are likely to have strengths and weaknesses in various competitive environments and are a potential source of competitive advantage (Barney, 1991). To clarify how entrepreneurs think, Busenitz and Barney (1997) found that entrepreneurs used heuristics much more than managers in big organizations. Heuristics refers to the simplifying strategies that entrepreneurs use to make strategic decisions in situations of incomplete or uncertain information (Alvarez and Busenitz, 2001:758). Consequently, they think in a manner which leads to innovative ideas that are not always very linear and factually based. This is important for entrepreneurs because they find themselves in situations that tend to maximize the potential effect of various heuristics.

Heuristic-based logic enables entrepreneurs to quickly interpret uncertain and complex situations leading to forward-looking approaches, perceiving new opportunities, faster learning, and innovations. Thus, entrepreneurial cognition can be a source of competitive advantage (Alvarez and Busenitz, 2001). When insights and decisions reached with heuristic-based logic are potentially valuable in the market, rare, difficult to imitate, and exploited by entrepreneurs, then these entrepreneurial insights and decisions are a resource that can potentially lead to a competitive advantage. Alvarez and Busenitz (2001) argue that those with an entrepreneurial cognition can enable a potential competitive advantage in at least two ways. The first is the discovery of new opportunities. Entrepreneurial cognition can help us better understand why some individuals see new opportunities where most others see either a benign environment or emerging threat. The second area involves the initial stages of organizational development. Entrepreneurial cognition can allow entrepreneurs to navigate through a wide array of problems and irregularities inherent in the initial stages of organizational development (Alvarez and Busenitz, 2001).

2.5.1.2 Entrepreneurial discovery of new opportunities and heterogeneity

One of the main reasons that fascinate people about entrepreneurs and their inventions seems to centre on why and how they see and create new opportunities (Alvarez and Busenitz, 2001:759). An entrepreneurial opportunity involves the development of a new idea that, in most cases, others have overlooked or chosen not to pursue. This cognitive ability of entrepreneurs to visualize situations in an opportunistic manner is a heterogeneous resource that can be used to develop other resources.

Two perspectives have been used to explain entrepreneurial discovery of opportunities (Alvarez and Busenitz, 2001). The first has to do with how information is searched, obtained, and used to lead to new inventions. The second has to do with the recognition process by which new discoveries are made. From the search perspective, there seems to be two opposing suggestions from the literature. Some

research suggests that discovery can be accurately modelled as a rational search process while others argue that the search for discovery cannot be accurately modelled as a rational search. In modeling discovery as a rational search, the assumption is that entrepreneurs know where the invention needs to be made and can accurately weight the cost and benefits of acquiring new information relevant to the invention. This implies that an extensive search is targeted in the direction where the discovery is to be made (Alvarez and Busenitz, 2001).

The argument against discovery being modelled as a rational search has focussed on the process side of discovery. Kirzner (1979) cited in Alvarez and Busenitz (2001:760) developed the term “entrepreneurial alertness” to back up this argument. Entrepreneurial alertness is the ability to see where products or services do not exist. Entrepreneurial alertness exists when an entrepreneur has flashes of superior insight into the value of a given resource when others do not, enabling him/her to recognize an opportunity when it presents itself.

Kirzner (1979) cited in Alvarez and Busenitz (2001:760) argues that there is a significant difference between entrepreneurial alertness and the knowledge expert. The knowledge expert is unaware of the value of their knowledge or how to turn that knowledge into a profit. However, the entrepreneur can recognize the value and the opportunity of the expert’s knowledge (for example, technological expertise) even though he or she may not have the specific knowledge of the expert (Alvarez and Busenitz, 2001). With regards to entrepreneurs, specialized knowledge is often knowledge about opportunities created by the environment or a new product or even the opportunities of a potential new product. While the entrepreneur may possess this specialized knowledge, it is the tacit generalized knowledge of how to organize and use specialized knowledge that is the entrepreneur’s main intangible resource (Alvarez and Busenitz, 2001).

2.5.1.3 Recognising market opportunities and heterogeneity

Some debate in the field of entrepreneurship has focused on whether or not the perfect competition model can be used to explain entrepreneurial behaviour (Shane and Venkataraman, 2000). However, it is also important to pay special attention to the conditions under which entrepreneurial opportunities can be most efficiently realized through both market and non-market forms of exchanges (Alvarez and Busenitz, 2001:760). Entrepreneurs can either use market forms of governance or they can use an organization as a form of hierarchical governance to coordinate many resources which are necessary to realize an economic opportunity. Since these forms of exchanges carry costs, it becomes important for the entrepreneur to know when it is less costly to use one form of exchange over the other (Alvarez and Busenitz, 2001).

The types of resources and capabilities that require specific investment in order for their full economic value to be realized have been identified by resource-based logic. These include resources and capabilities that are socially complex, path dependent, and tacit (Barney, 1991). When the realization of the economic value associated with an entrepreneurial opportunity depends on the use of the above mentioned resources, it is more likely that an organization as a form of hierarchical governance will be used to realize this value as opposed to a non-hierarchical form of governance (Alvarez and Busenitz, 2001). These ideas suggest that entrepreneurial organizations are likely to arise in an economy in the presence of conditions that require the efficient coordination and integration of knowledge.

Schumpeter (1934) cited in Alvarez and Busenitz (2001:761) noted an important distinction between invention and innovation. Invention is the discovery of an opportunity while innovation is the exploitation of a profitable opportunity. This distinction sees the organization as a problem solving institution. As such, forming an organization is basically an entrepreneurial act because to coordinate and transmit tacit knowledge, the coordination of the organization is required. Thus, the

entrepreneur's ability to transform creative insights and homogenous inputs into heterogeneous outputs makes the organization a superior choice over the market (Alvarez and Busenitz, 2001).

Knowledge costs can be used to further support this notion. Knowledge is not free, and the fact that it differs across organizations lends a supporting hand to an organization's heterogeneity. Thus, the entrepreneur's coordination of specialized knowledge makes the heterogeneous organization a superior choice over the markets. Organizations are a bundle of commitments to technology, human resources, and processes all covered by knowledge that is specific to the organization. This bundle and how the entrepreneur coordinates it allows some organizations to be heterogeneous and such organizations are not easily altered or imitated (Alvarez and Busenitz, 2001).

2.5.1.4 Coordination of specialized knowledge and heterogeneity

Alvarez and Busenitz (2001:762) note that entrepreneurial specialized knowledge is the ability to take abstract information concerning where to obtain undervalued resources and how to use these resources. Such resources can be explicit and/or tacit. Entrepreneurship involves a combination of resources as entrepreneurs bundle old resources to produce new ones. Schumpeter suggested five situations where this phenomenon can occur. According to Schumpeter (1934:132) cited in Alvarez and Busenitz (2001:762), the entrepreneur revolutionizes the pattern of production by exploiting an invention or an untried technology, by opening up a new source of supply of materials or a new outlet for products, or by reorganizing an industry.

Most recent discussion on opportunity discovery has focussed on markets, both factor and product markets. However, once the discussion turns to factor markets (and thus production which involves the creation of value through the transformation of inputs into outputs) there arises a need for the coordination of different types of

specialized knowledge (Alvarez and Busenitz, 2001). The important word in this discussion is coordination. Knowledge can either be tacit which is personal and more difficult to communicate or interpret, or it can be explicit such as technology. Without coordination, however, knowledge is often dispersed, fragmented, and sometimes even contradictory. The entrepreneurial challenge is how to utilize resources to obtain a profit, suggesting that entrepreneurial knowledge is mainly an abstract knowledge of where and how to obtain resources (Alvarez and Busenitz, 2001).

Therefore, when the market fails to organize distributed knowledge, the entrepreneur turns to the opportunity resulting in a new organization (Alvarez and Busenitz, 2001). While markets are often inefficient at knowledge transfer and integration, the primary role of the organization is to integrate specialized knowledge. Markets are inefficient at integrating knowledge mainly because explicit knowledge can be imitated with ease and tacit knowledge by definition cannot be articulated. Since tacit knowledge can't be articulated, transferring it becomes an impossible task (Alvarez and Busenitz, 2001).

2.5.2 Expectancy theory

The importance of preferred compensation practices for enhancing desired employees' behaviour can also be examined through the lens of the expectancy theory. This theory assumes that employees' effort and performance are related to their expectations. This means employees act in ways that they believe will result in rewards of some importance to them such as higher earnings (Lerner et al, 2009). This also suggests that managers can positively influence their employees by making pay contingent upon performance. Lerner et al (2009) noted that compensation practices should include procedures for influencing an employee's work, appraising their performance, and compensating them. Yanadori and Marler (2006) note that compensation practices can be connected to strategic objectives by defining the critical employee groups and choosing an appropriate policy for internal structure, mix of compensation types, and basis for pay increases. In sum, according

to the expectancy theory, entrepreneurial employees who believe that their efforts will result in outcomes that reward them appropriately will remain committed to the entrepreneurial goals set for them within the organization (Lerner et al, 2009).

Generally speaking, the expectancy theory is the dominant theoretical framework for explaining human motivation (Manolova, Brush, and Edelman, 2008:70). Expectancy theory uses three relationships to explain the concept of motivation: expectancy, valence, and instrumentality. Expectancy is the subjective probability that effort will lead to an outcome. Valence is the anticipated satisfaction that results bring and instrumentality describes the relationship between an outcome and another outcome (Vroom, 1964 cited in Manolova et al, 2008). In the field of entrepreneurship, the expectancy framework has been used in many empirical studies. For example, Shaver, Gartner, Crosby, Bakalarova, and Gatewood (2001) found that entrepreneurs who believed in their skills and ability were motivated to put in the required effort in pursuing their goals.

Manolova et al (2008) conceptualized new venture creation as a process based on an effort-performance-outcome model. This suggests that the effort used to start a new business (performance) leads to a certain desired outcome. Interpreting this model using the expectancy theory implies that starting the new venture (first-level outcome) will lead to the following desired outcomes: self-realization, status, financial success, and autonomy (Manolova et al, 2008:71). This is consistent with findings from Manolova et al (2008:78) which suggested that entrepreneurial expectancy was significantly and positively associated with the expectation that the launch of a new venture will lead to desired outcomes. This expectation was found to be significantly associated with the desired outcomes of self-realization, financial success, status, and autonomy. Their result lends support to the explanatory power of expectancy theory in examining entrepreneurial start-up motivations (Manolova et al, 2008).

2.5.3 Agency theory

Agency theory is crucial, yet controversial. It has been used by scholars in many different fields which include accounting, economics, finance, political science, marketing, and organizational behaviour (Eisenhardt, 1989:57).

2.5.3.1 Origins of agency theory

During the 1960s and early 1970s, some economists (Arrow, 1971; Wilson, 1968 cited in Eisenhardt, 1989:58) explored risk-sharing among individuals or groups and concluded that the risk sharing problem arises when cooperating parties have different attitudes toward risk. This concept of risk-sharing was broadened by the agency theory to include the agency problem which occurs when cooperating parties have different goals and division of labour. To be more specific, the agency theory looks at the agency relationship, in which one party (the principal) delegates work to another (the agent), who does the work (Eisenhardt, 1989). In most cases, this agency relationship between the principal and the agent is governed by a contract. Two main problems occur in the agency relationship and agency theory tries to resolve these.

The first agency problem arises when the goals of the principal and the agent conflict and at the same time it is difficult or expensive for the principal to monitor what the agent is doing (Eisenhardt, 1989). The second agency problem is that of risk sharing which arises mainly when the principal and agent have different risk preferences. Since a contract governs the principal-agent relationship, the agency theory seeks to use the assumptions about people (for example, self-interest), organizations (for example, goal conflict among employees), and information (for example, information is an asset which can be purchased) to determine the most efficient contract which can govern the principal-agent relationship (Eisenhardt, 1989:58). In this light, two choices exist: a behaviour-oriented contract (for example, salaries and hierarchical

governance) or an outcome-oriented contract (for example, commissions, stock options, and market governance). Table 3 gives an overview of the agency theory:

Table 3: Agency theory overview (Eisenhardt, 1989:59)

Key idea	Principal-agent relationships should reflect efficient organization of information and risk-bearing costs
Unit of analysis	Contract between principal and agent
Human assumptions	Self-interest, bounded rationality, risk aversion
Organizational assumptions	Partial goal conflict among participants, efficiency as the effectiveness criterion, information asymmetry between principal and agent
Information assumptions	Information as a purchasable commodity
Contracting problems	Agency (moral hazard and adverse selection), risk selection
Problem domain	Relationships in which the principal and agent have pertly differing goals and risk preferences 9for example, compensation, regulation, leadership, impression management, whistle-blowing, vertical integration, transfer pricing)

The agency theory took its roots from information economics and has developed along two streams since then – the positivist and the principal agent (Eisendhardt, 2008). These two streams share common assumptions about people, organizations, and information. They also use the same unit of analysis (the contract between the principal and the agent). However, they differ in the level of their mathematical rigour, dependent variable, and style of application (Eisenhardt, 2008:59).

2.5.3.2 The positivist agency theory

The main focus of positivist researchers is to identify situations in which the principal and agent have conflicting goals while explaining the governance mechanisms that limit the agent's self-serving behaviour (Eisenhardt, 1989). Positivist research has mostly focussed on the principal-agent relationship between owners and managers of large public organizations and it also has a lower level of mathematical rigour than the principal-agent research. In establishing the positivist theory, three studies have been particularly influential:

- Jensen and Meckling (1976) cited in Eisenhardt (1989:59) studied the ownership structure of the organization including how share ownership by managers align managers' interests with those of shareholders.
- Fama (1980) cited in Eisenhardt (1989:59) studied how efficient capital and labour markets could be used as information mechanisms to control the self-serving behaviour of top-executives.
- Fama and Jensen (1983) cited in Eisenhardt (1989:59) studied the role of the board of directors as an information system that the shareholders within large organizations could use to monitor the opportunism of top executives.

Theoretically, the positivist research has focussed mostly on describing the governance mechanisms that solve the agency problem and two propositions have been used to capture these governance mechanisms. The first proposition is that outcome-based contracts can be used effectively to curb agent opportunism. This first proposition argues that outcome-based contracts align the preferences of agents with those of the principal because the rewards for both depend on the same actions, and thus, the agents are more likely to behave in the interests of the principals (Eisenhardt, 1989:60).

The second proposition states that information systems can be used to curb agent opportunism. Information systems inform the principal about what the agent is actually doing. This minimises the agent's chances of deceiving the principal, thus curbing agent opportunism. Positivist theory offers a more complex view of organizations although it has been criticised by both organizational theorists and micro-economists (Eisenhardt, 1989).

2.5.3.3 Principal-agent stream of agency theory

Principal-agent researchers focus on the general theory of the principal-agent relationship (Eisenhardt, 1989). The principal-agent paradigm is just like every formal theory – characterised by specified assumptions which are followed by logical deduction and mathematical proof. The positivist stream is more accessible to organizational scholars while the principal-agent theory is less accessible due to its abstract and mathematical nature. Despite this, the two streams are complementary. Positivist theory focuses on various contract alternatives while principal-agent theory indicates which contracts are most efficient under different levels of outcome uncertainty, risk aversion, and information (Eisenhardt, 1989:60).

The principal-agent theory attempts to determine the optimal contract (behaviour versus outcome) between the principal and the agent. It uses a simple model with the following three assumptions: goal conflict between principal and agent, an easily measured outcome, and an agent who is more risk averse than the principal. Agents are more risk averse than principals because they are unable to diversify their employment while principals can diversify their investments. The approach of this simple model can be described using two cases. In the first case, the principal knows what the agent has done (complete information) while in the second case, the principal does not know what the agent has done. The second case can arise in a situation where the agent chooses his/her self-interest over that of the principal. The agent can behave in this manner when his/her goals are not aligned with those of the principal (Eisenhardt, 1989).

Two aspects of the agency theory are cited in the formal literature: moral hazard and adverse selection (Eisenhardt, 1989). A moral hazard situation arises when the agent does not put forth the agreed-upon effort. For instance, a research scientist working on a personal research project during company time, but is undetected by management due to the complex nature of the research. An adverse selection occurs when the agent misrepresents his/her ability. The agent may claim to have certain skills during the hiring process which the principal cannot completely verify (Eisenhardt, 1989:61). Moral hazard and adverse selection confirms that the agent has unobservable behaviour, and in trying to solve this problem the principal has two options.

One option is to use information systems, such as budgeting systems, reporting procedures, and additional layers of management to reveal the agent's behaviour to the principal. The second option is to use an outcome-based contract which motivates behaviour by aligning the agent's preferences with those of the principal. However, an outcome-based contract has a cost in that it transfers risk to a risk averse agent (Eisenhardt, 1989). The issue of risk arises because outcomes are not only influenced by the agent's behaviour; they are also influenced by government policies, economic climate, competitors, and technological change. It follows that outcome-based contracts are attractive when outcome uncertainty is low. As outcome uncertainty increases, it becomes more costly to shift risk to the agent. In summary, the main focus of the principal-agent theory is the trade-off between the cost of measuring behaviour and the cost of measuring outcomes and transferring the risk to the agent (Eisenhardt, 1989:61).

2.5.3.4 Hypotheses development

To re-emphasize, agency theory postulates that the result of communications between a principal and an agent, in which the principal delegates work to the agent, is the essence of the relationships within organizations (Roth and O'Donnell, 1996). The major problem identified by this theory is the incongruence that exists between

the goals of the principal and the agent, and the difficulty of monitoring the agent's behaviour. Goal incongruence results from the assumption that principals and agents are possibly pursuing different interests. A principal can, however, limit the agency problem by implementing desired incentives for an agent or by incurring monitoring costs (Lerner et al, 2009). Thus, the agency theory supports the argument that employees should be rewarded for evidence of innovation-related activities, independently of observed financial performance outcomes (Balkin et al, 2000).

Agency theory emphasizes the risk attitudes of principals and agents (Barney and Hesterly, 1996) and helps provide a solution on how best to promote the innovative contributions of employees given the inherent uncertainty of the ultimate success of an innovation. Principals (executives) can diversify their shares over multiple organizations and thus are assumed to be risk-neutral while agents (employees) are assumed to be risk-averse because their employment security and income are tied to one organization. This risk differential as noted by Beatty and Zajac (1994) creates a conflict of interest between risk-neutral executives, who prefer that agents maximize organizational returns and risk-averse employees, who prefer to be conservative in their decisions to reduce their risk exposure.

Emphasis on innovation implies a greater variability of outcomes and a greater probability of failure which leads to greater uncertainty and complexity (Balkin et al, 2000). This implies risk-averse employees will be bearing greater risk if they engage in innovative behaviours and thus the challenge is to set up compensation practices that change the risk orientation of employees to align them with the interests of executives. For compensation practices to be effective in making an employee's risk orientation more consistent with that of executives, in this case encouraging employees to make risky investments in innovation, it is necessary to use a compensation criteria that employees can influence. Pay levels should be higher and part of total compensation should be based upon levels of innovative efforts rather than the outcomes of innovation such as increased profits (Balkin et al, 2000).

This leads to a fundamental argument in the agency and compensation literature in that, the performance of employees attracted to a compensation plan may increase in relation to the incentive intensity of rewards, measured as the variable portion of pay (Zenger and Marshall, 2000). Employees' marginal gains in income increases with higher incentive intensity of rewards and if increased effort has physical or psychological costs, employees will choose levels of effort such that the marginal gains from those efforts equals their marginal cost (Lerner et al, 2009). Therefore, pay plans which are more incentive intensive will drive employees to reach higher levels of effort and may also lure and keep talented employees (Zenger, 1994).

Even though compensation practices play a vital role by providing an incentive for the agent to act on behalf of the principal, Jones and Butler (1992) claimed that such practices must be matched to structure in order to promote corporate entrepreneurship at all levels in the organization. Defining and controlling the principal and agent is the central issue in providing the incentives necessary for entrepreneurship. In order to solve the agency problem, the interests between the principal and the agent need to be aligned when the intrapreneur is the agent, not the principal. Focussing on typologies of compensation, the literature notes two types of rewards: contingent and non-contingent rewards (Lerner et al, 2009). Contingent rewards are based on the employee's or group's performance level while non-contingent rewards are benefits flowing from affiliation with the organization or having a particular status in the organization.

Individual risk-taking behaviour is important for entrepreneurship in existing organizations and the traditional approach to model individual risk-taking behaviour in corporate entrepreneurship is based on agency theory (Monsen et al, 2009). Without proper monitoring and control mechanisms, individual agents will minimize individual risk and maximize personal gain, even when it is not in the interest of the owners of the organization. For example, a manager (agent) might have the incentive to engage in risky decisions under the pretense of entrepreneurship, but not suffer the consequences of his or her poor decision making. Owing to such issues, the principal (organization) will want to monitor the agent's decision making.

One way to achieve this is to use operation's control mechanisms such as risk control to balance the interests of principals and agents in the successful pursuit of innovation via corporate entrepreneurship (Goodale et al, 2010). Sexton and Camp (1993) noted that equity is always important regardless of the incentive program designed. In general though, establishing equitable incentives to encourage corporate entrepreneurship is a difficult process (Jones and Butler, 1992). This is because the identity of principal and agent changes with respect to the entrepreneurial context, making it difficult to align their rewards with uncertainty and risk preferences (Lerner et al, 2000). This situation suggests that there could be barriers preventing the establishment and implementation of the desired compensation practices.

Contingent compensation is important in most high-performance work systems and they include gain sharing, profit sharing, stock ownership, pay for skill, or various forms of individual or team incentives (Lerner et al, 2009). The literature suggests that there is a contingency relationship between compensation practices that support innovation and the degree of uncertainty, that is, the need to encourage employees to accept risk is moderated by the degree of risk or uncertainty associated with innovation (Hayton, 2005). Based on the above discussion, three hypotheses are formulated:

Hypothesis 1: Actual compensation practices are positively related to employees' elevated intrapreneurial behaviour.

Hypothesis 2: Desired compensation practices are positively related to employees' elevated intrapreneurial behaviour. Intrapreneurial employees prefer/desire outcome-based compensation practices which refers to those which are directly linked to success of the intrapreneur's idea/initiative/new venture; for example, options in new venture equity and variable bonuses for milestones achieved.

Hypothesis 3: Department's risk control moderates the relationship between desired compensation practices and employees' elevated intrapreneurial behaviour.

2.6 Conclusion

An extensive review of studies examining compensation practices, intrapreneurship, and risk control was conducted. Different theoretical perspectives (resource-based, expectancy, and agency theories) on how compensation, innovation (intrapreneurial behaviour), and risk-taking interact with one another were debated. The agency theory was identified as the most relevant to this study.

Based on the reviewed studies, it appears compensation is only one of the many factors that can elevate an employee's intrapreneurial behaviour. Other factors like the organization's strategy, culture, and industry can also impact an employee's intrapreneurial behaviour. The review also pointed out that organizations face certain problems when it comes to designing and implementing compensation practices.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This research was conducted as a quantitative empirical study with primary data sources, following a cross-sectional design. An attempt was made to determine possible links between the independent variables (actual compensation practices and desired compensation practices) and the dependent variable (elevated employees' intrapreneurial behaviour); that is, how the independent variables (antecedents) and the dependent variable (consequent) are related, to the extent that a change in the independent variables are presumed an explanatory factor of the dependent variable.

The researcher first examined the particular effect of the first two independent variables on the dependent variable. Subsequently, department's risk control was investigated as a moderator. The hypothesized relationships among study variables were schematically represented via independent and moderating effects as set out in Figure 1.

The researcher had no ability to manipulate the variables under study but reported how these variables interacted with one another. The research design was therefore descriptive, ex-post facto, and correlational (Coldwell and Herbst, 2004).

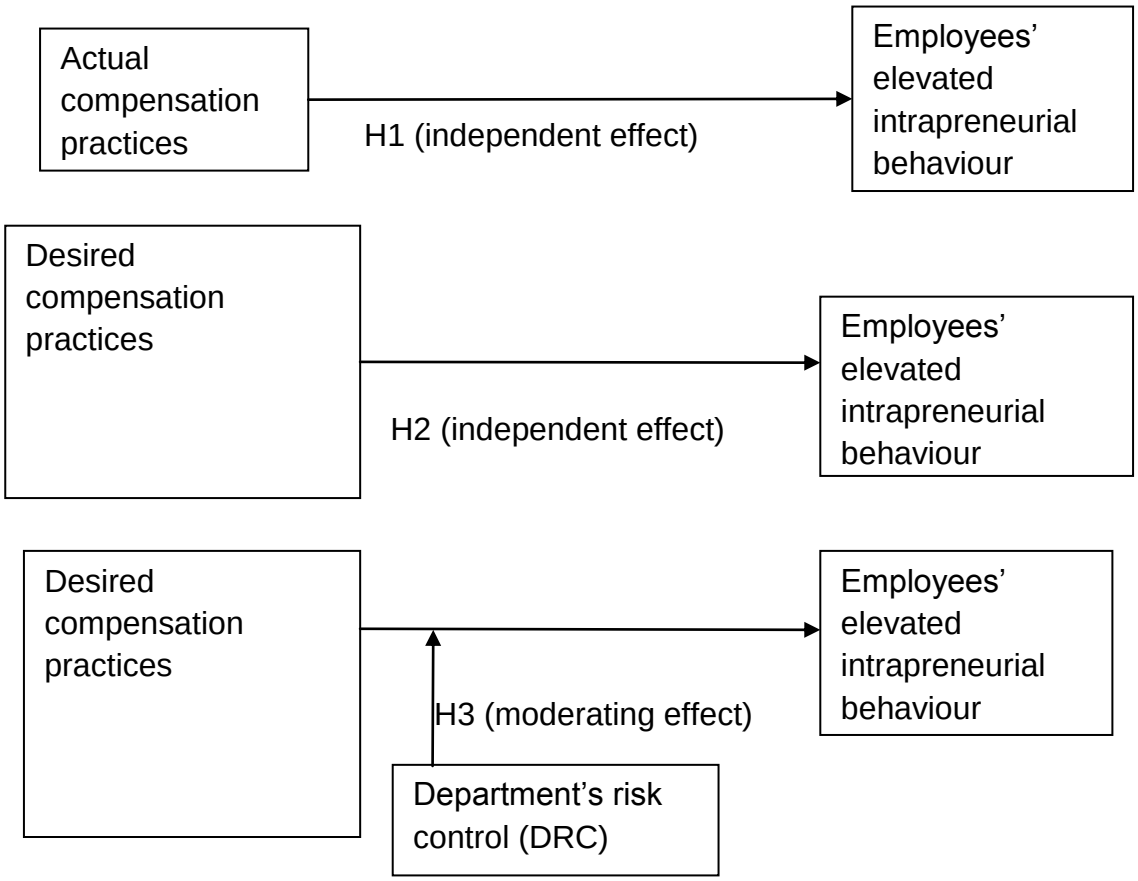

Figure 1: Schematic representation of hypothesized relationships

3.2 Literature review methodology

A literature search was used to source articles used in the literature review section. Databases were selected according to their level of relevance to the topics under review. The following three electronic journal databases and platforms were extensively used:

- JSTOR database;
- EBSCO HOST (business source complete) database, and
- ScienceDirect database.

The primary keywords used for search queries were: corporate entrepreneurship, intrapreneurship, intrapreneurial/entrepreneurial behaviour, compensation practices, agency theory, expectancy theory, resource-based theory, and human resource management practices. Reference sections of empirical studies were examined for studies that were not revealed through an electronic search.

Amongst other journals, the following prestigious peer reviewed journals were consulted:

- Academy of Management Journal;
- Academy of Management Review;
- Entrepreneurship Theory and Practice;
- Strategic Management Journal, and
- Journal of Business Venturing.

Usually, peer reviews address critical research methodology techniques such as sampling design, measurement instruments, and response strategies.

3.3 Instrument design

Items from existing measuring instruments were combined, modified, and expanded as required for this study. Besides the demographic and biographical measures, the instruments measured the following:

- Actual compensation practices;
- Desired compensation practices;
- Current intrapreneurial behaviour;

- Elevated intrapreneurial behaviour, and
- Department's risk control.

Some of the existing items used in constructing the instruments for this study included:

- Items previously used by Miller and Friesen (1982:24) to measure a firm's risk-taking/aversion propensity;
- Items previously used by Block and Ornati (1987:50) to measure current and desired incentives for improved venture manager's performance, and
- Items previously used by Pearce II, Kramer, and Robbins (1997) to measure entrepreneurial behaviour by managers, and some personal initiative items previously used by Frese, Fay, Hilburger, Leng, and Tag (1997).

According to Grimm and Yarnold (1995), the main objective of any measuring instrument is to eliminate measurement errors and the problems associated with reliability or validity of the procedures used to measure the variables.

Cooper and Schindler (2008:289) use three major criteria to evaluate a measurement tool:

- Validity: The extent to which an item measures what it is supposed to measure.
- Reliability: This refers to consistency in measurement. Different measures of the same construct repeated over time should produce the same results. It is important to note that measures can be reliable without being valid, but cannot be valid without being reliable.
- Practicality: This is concerned with the wide range of factors of economy, convenience, and interpretability.

With regards to validity, there is no technical way to evaluate the validity of a scale, but through principal component factor analysis, common factor analysis, and structural equation modeling, one can gain confidence in the validity of a scale by determining whether it has the relationships to other variables that are expected on theoretical grounds (Hair, Black, Babin, and Anderson, 2010).

According to Treiman (2009: 244), the reliability of a scale can be measured through any of the following ways:

- Test-retest reliability: It measures the correlation between scores of a scale administered at two points in time.
- Alternate-forms reliability: It is the correlation between two different scales thought to measure the same underlying dimension.
- Internal-consistency reliability: It is a function of the correlation among the items in a scale. Cronbach's alpha is the internal-consistency measure used in this study.

With reference to economy (practicality), an online survey instrument was sent to 671 respondents via the survey monkey website (www.surveymonkey.com). The completed survey instrument was also collected via the survey monkey website. This saved on travel and survey printing costs which would have been incurred had the researcher chosen hand-delivery of the survey instruments. The instrument also passed the convenience test because each section had clear instructions to the respondent. The researcher collected the completed questionnaires, analyzed the data, and interpreted the results. Issues of interpretability are thus irrelevant in this case. Interpretability is relevant when persons other than the researcher must interpret the results (Cooper and Schindler, 2008:295).

The questionnaire (Appendix 1) had close-ended questions and was divided into the following six sections:

- Section A: Items concerning personal background (biographical questionnaire);
- Section B: Items measuring actual compensation practices;
- Section C: Items measuring desired compensation practices;
- Section D: Items measuring employees' current intrapreneurial behaviour;
- Section E: Items measuring employees' elevated intrapreneurial behaviour, and
- Section F: Items measuring department's risk control.

Response strategies included fixed sum scales and ratings using a five point Likert-type scale.

3.4 Sampling and data collection

According to Mouton (2002:135), the term population and universe are always constructed entities within the context of a specific research project. After defining the targeted population, it must be made operational by constructing a sampling frame, from which the sample will be drawn. There are two primary kinds of samples which differ in the ways the elementary units are chosen: probability sample and non-probability sample (Coldwell and Herbst, 2004: 79).

Due to time constraints, cost implications, and the difficulty of conducting a probability sample, a non-probability convenience sampling technique was used. This kind of sampling is the least reliable (Cooper and Schindler, 2008). Be that as it

may, the important issue about sampling in general, is not statistical but that of theoretical representativeness (Davidsson, 2004).

Consistent with Monsen et al (2009:111), Monsen et al (2007:5), Amo and Kolvereid (2005:12), the sample for this research was composed of 671 corporate employees in the Master of Business Administration (MBA) or Postgraduate Diploma in Management (PDM) programme at the Graduate School of Business, University of the Witwatersrand situated in Johannesburg, South Africa. Only full time employees from entry to managerial level were required for this study. The email addresses of the respondents were sourced from various class-representatives of the MBA part-time and PDM part-time classes for the years (2008, 2009, 2010 and 2011). The part-time class was used because it was composed of full time corporate employees who are likely targets for involvement in intrapreneurial activities.

Based on the nature of the formulated hypotheses, a survey/questionnaire was designed and used to collect data. The research questionnaire was uploaded on the survey monkey website (www.surveymonkey.com) and sent to the 671 respondents. Data collection lasted four weeks, at the end of which 266 responses were received but 57 of those responses were discarded because they were incomplete. The response rate was 31.15%, as only 209 respondents completed the questionnaire.

Some issues regarding ethical requirements were considered. Consent was formalized through a written agreement identifying the boundaries and extent of the permission to hand in questionnaires to participating employees. Full and open information (informed consent) was made available to respondents and based on this, some respondents voluntarily agreed to participate. No form of deception and misrepresentation was used to extract information from the respondents and their privacy and confidentiality was respected at all times.

Actual compensation practices was measured using a five-point Likert-type scale (17 items) with anchors “never” (=1) to “very often” (=5). Desired compensation practices was measured using a five-point Likert-type scale (17 items) with anchors “disagree strongly” (=1) to “agree strongly” (=5). Current intrapreneurial behaviour was measured using a five-point Likert-type scale (18 items) with anchors “disagree strongly” (=1) to “agree strongly” (=5). Elevated intrapreneurial behaviour was measured using a five-point Likert-type scale (18 items) with anchors “disagree strongly” (=1) to “agree strongly” (=5). Department’s risk control was measured using a five-point Likert-type scale (9 items) with anchors “disagree strongly” (=1) to “agree strongly” (=5). All the items for the above scales can be found in the research questionnaire (Appendix 1).

3.5 Data analysis techniques

Statistics was used in order to avoid superficial interpretations not suitable to qualitative analysis. In addition to using descriptive statistics and graphs, three main statistical tests were done: t-test for dependent/related groups, canonical analysis, and moderation analysis.

3.5.1 T-test for dependent groups

T-test for dependent groups is used when two groups of observations (that are to be compared) are based on the same sample of subjects who were tested twice. Two important conditions (normality and equality of variances) should be met before the t-test can be used (Statsoft, 2011). In this study, each respondent was asked about the actual compensation practices (ACP) in their respective organizations and what they wanted as desired compensation practices (DCP). The t-test for dependent groups was conducted to find out whether a gap/difference exists between actual and desired compensation practices. The normality assumption was evaluated by

looking at the distributions of the ACP and DCP data via their respective histograms. The equality of variance assumption was verified using the F-test. These two assumptions were met and the sample size of N=209 was large enough (Statsoft, 2011).

3.5.2 Multivariate analysis approach

Hypotheses one and two were tested using multivariate analysis. This method is often used when researchers need to relate one set of variables to other sets of variables or when it is necessary to represent a large data set by several, easy-to-interpret variables (Lerner et al, 2009). With this method, the effects of key variables in one data set on all or several of the variables in the other sets can be easily identified. Several types of multivariate analyses exist and in the case of two or more data sets, canonical correlation analysis has been successfully used in previous research (Tishler, Dvir, Shenhar, and Lipovetsky, 1996). The researcher used canonical correlation analysis to test hypotheses one and two. A canonical analysis setup and notation is summarized in the next paragraph.

Suppose that we are given two sets of data, each organized in a matrix,
as follows: *Xij, i* = 1, . . . , k; *j* = 1, ..., *n*, and *Yij*, *i* = 1, . . . , k; *j* = 1,
. . . ., *m* (Lerner et al, 2009:68). In the management field, each data set may include a group of specific variables describing various attributes of one organization or assessments of one individual. In this research, *X* represented data on 17 variables (*n* = 17) describing ACP (hypothesis one) and DCP (hypothesis two) of the organization, and *Y* represented 18 variables (*m* = 18) describing elevated intrapreneurial behaviour (EEIB) of an employee.

3.5.3 Moderation analysis

Moderation deals with a situation where the researcher thinks the strength of a given regression relationship (between an independent variable and dependent variable) is affected by the level of a third variable (the “moderator”) (Statsoft, 2011). A moderator often expresses the context of the chosen independent-dependent variable relationship. Certain relationships only operate under certain contexts; in fact, some relationships may be negative under certain contexts but positive in others. Thus, moderation can therefore express something of the processes behind relationships, and also explain why “main effects” (independent-dependent variable slopes) are not always as strong as we expect (Statsoft, 2011).

Moderation is evaluated through interaction, that is, the moderator variable interacts with the independent variable in affecting the dependent variable. The independent variable was desired compensation practices and the moderator was department’s risk control (DRC). Risk was chosen as the moderator in this study based on the agency theory. In order to perform the moderation analysis, the “interaction variable” was created by multiplying the desired compensation practices first canonical roots with the averages of risk control variables.

CHAPTER 4: PRESENTATION OF RESULTS

4.1 Internal consistency reliability

Internal-consistency reliability is a function of the correlation among the items in a scale and it is measured with Cronbach's alpha (Treiman, 2009). This reliability measure was chosen because Cronbach's coefficient alpha has the most utility for multi-item scales at the interval level of measurement (Cooper and Schindler, 1995). Generally, a value above 0.7 is considered adequate for internal consistency. However, Cortina (1993:103) showed that alpha can be greater than 0.7, in spite of low average item intercorrelations or multidimensionality, provided there were several items. The Cronbach's alphas of the scales in this research were as follows:

- Actual compensation practices scale (α = 0.89);
- Desired compensation practices scale (α = 0.89);
- Elevated intrapreneurial behaviour scale (α = 0.89), and
- Department's risk control scale (α = 0.79).

Although Cronbach's alpha for actual and desired compensation practices have been listed, a closer look at these instruments revealed that they are not actually scales. Rather, they are instruments with a set of different compensation practices and as such it is unreasonable to measure internal consistency for such a measuring instrument. For example, opportunity for growth can be used as a standalone compensation practice. The same applies to job enrichment, options in new venture equity, and all the other compensation practices in the ACP and DCP scales.

4.2 Descriptive statistics

The following major sample characteristics were noted: slightly over half (56%) of the respondents were males; 62% were in the 26-40 years age group; almost all (89%) were in the entry to managerial level group of employees; very few (11%) were in the director to executive group of employees (this group, 22 respondents were omitted from the data analysis); approximately three-quarters (78%) had spent five years or less in their current organization; approximately two-thirds (68%) were in industries other than manufacturing, information technology, and telecommunications (some of these other industries included banking, finance, mining, and retail), and approximately two-thirds (69%) were in companies with 151 or more employees. These sample characteristics are depicted in Figures 2 to 7:

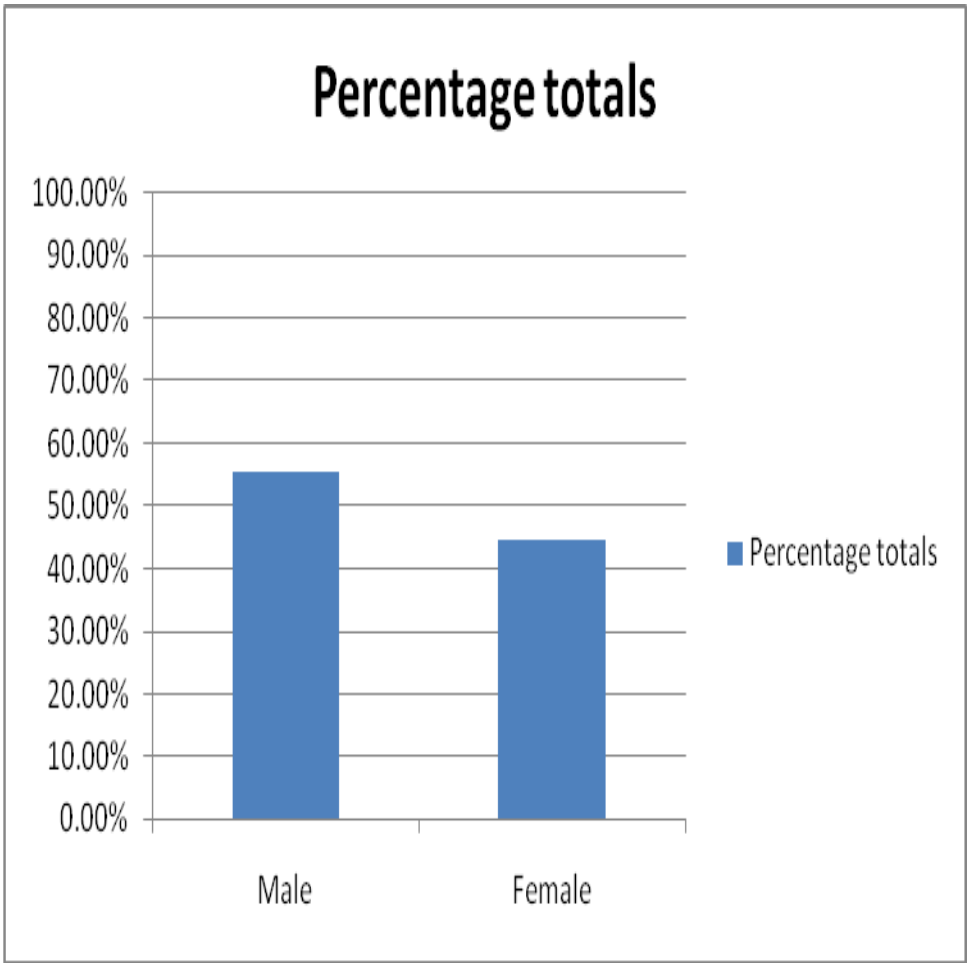

Figure 2: Gender of respondents

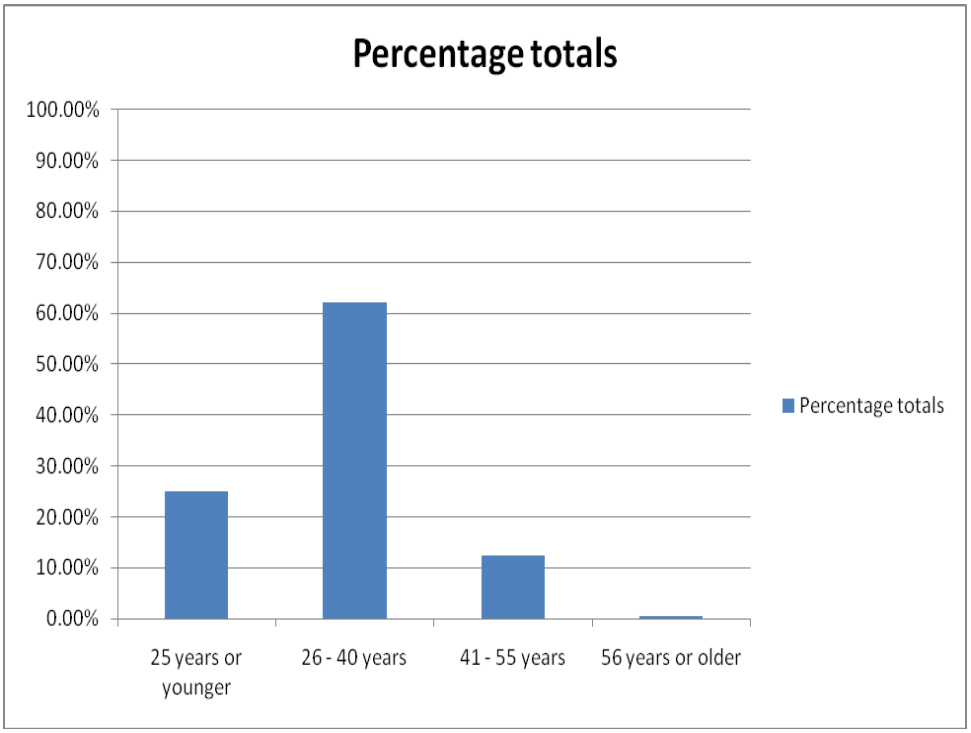

Figure 3: Age of respondents

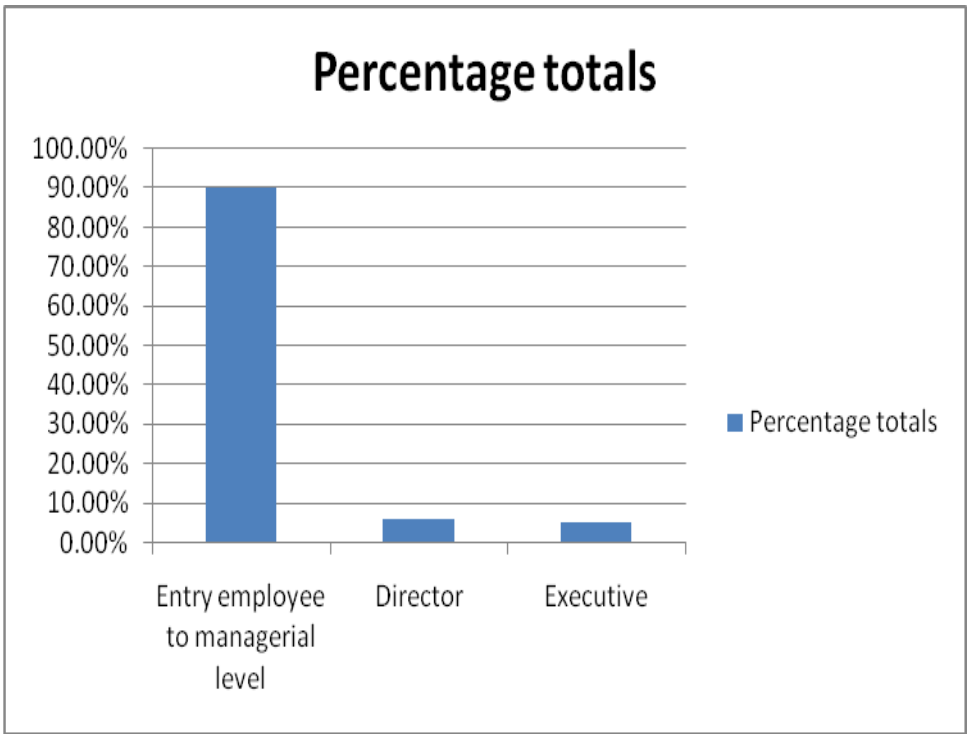

Figure 4: Job position

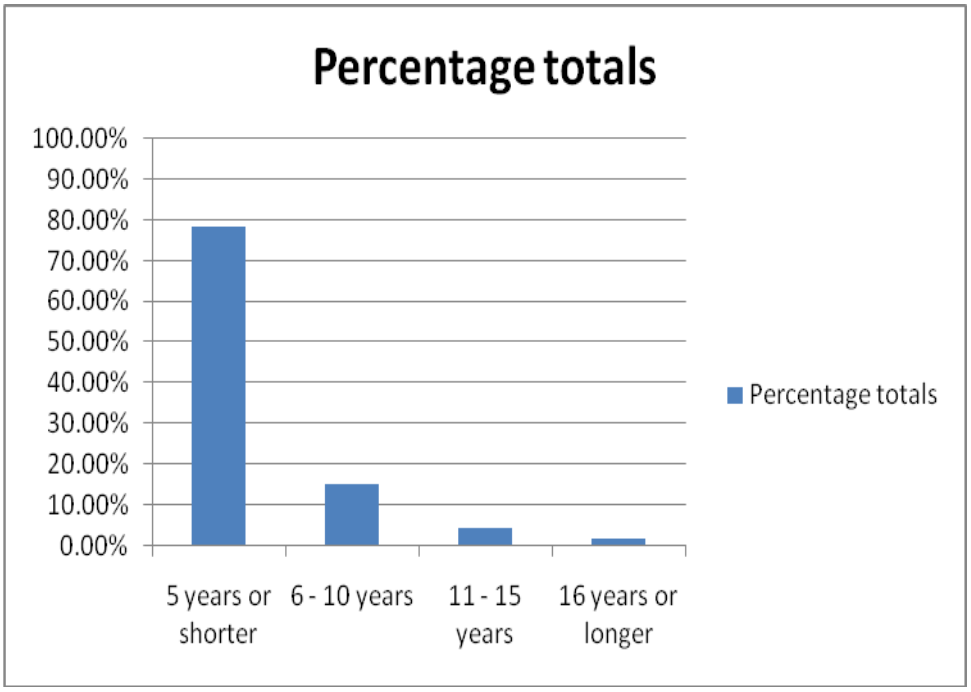

Figure 5: Years spent in current organization

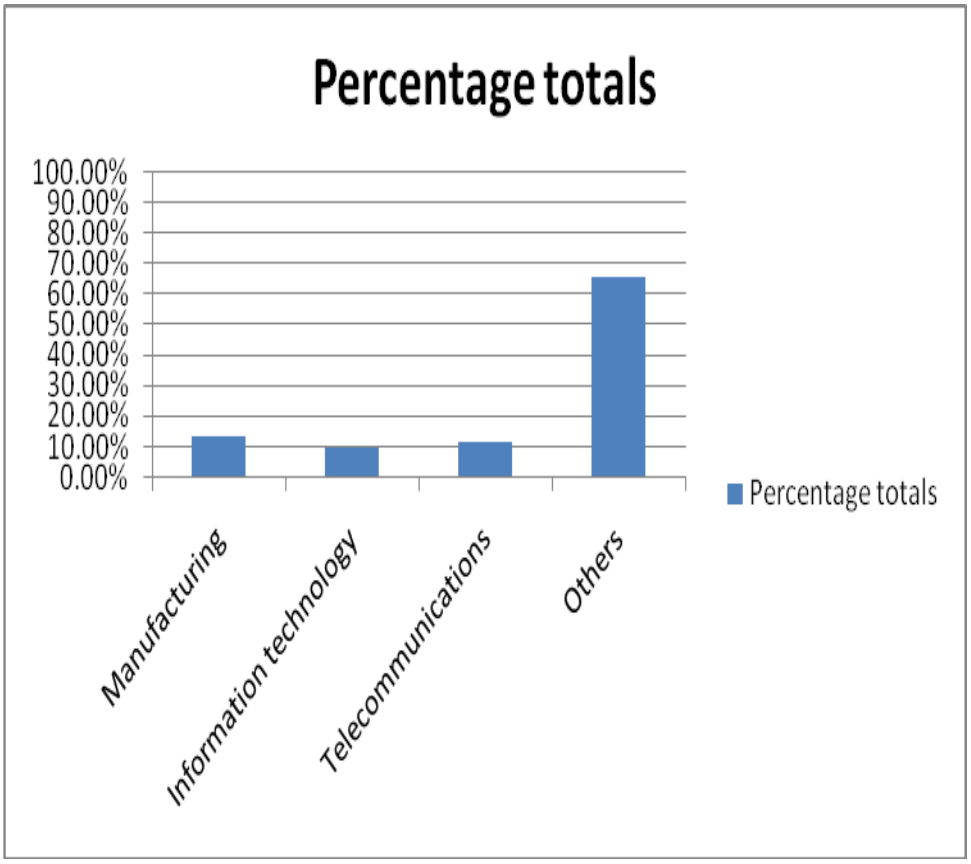

Figure 6: Organization's industry

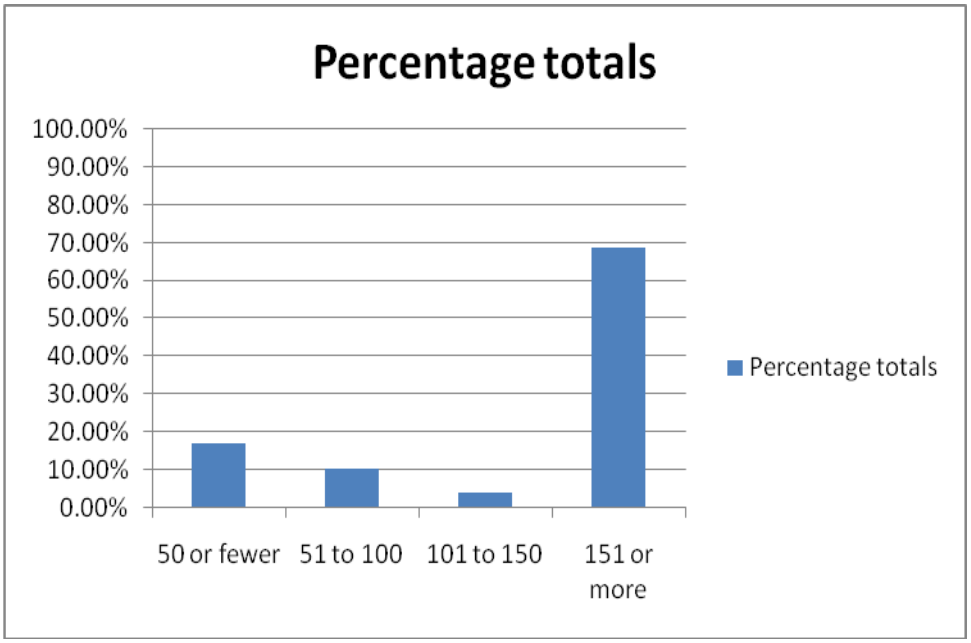

Figure 7: Organization's size

The five-point Likert-type scale items have approximately equal intervals. Thus metric statistics such as means, standard deviations, and parametric tests of significance were used, rather than adopting, for example, frequency analyses consistent with ordinal scales. The means for the ACP and DCP scales could not be calculated. A closer look at these instruments revealed that they were not actually scales. Rather, they were instruments with a set of different compensation practices. So it was unreasonable to calculate an average from the responses of such a scale. The means and standard deviations of the EEIB and DRC scales are depicted in Tables 4 and 5 and Figures 8 and 9.

Table 4: Means and standard deviations of elevated intrapreneurial behaviour scale

Elevated intrapreneurial behaviour scale items (range from 1 to 5)	Mean	SD
be unconcerned with danger	2.49	1.22
act and then ask for approval	2.98	1.30
expose myself to situations with uncertain outcomes	3.22	1.21
go for the big win even when things could go wrong	3.31	1.20
get proposed actions through bureaucratic red tape	3.59	1.20
take risks in my job	3.59	1.08
move ahead with a promising new approach	4.04	0.92
attack pressing organizational problems	4.17	0.93
devote a great deal of effort to selling my ideas	4.18	0.87
change course of action	4.18	0.94
get people to rally together to meet a challenge	4.25	0.93
use opportunities to attain my goals	4.27	0.89
show support for the good ideas of others	4.43	0.76
search for a solution immediately	4.43	0.82
display enthusiasm for acquiring skills	4.49	0.75
take the initiative for my own ideas	4.49	0.73
find ways to improve our products and services	4.49	0.75
think about my work in new and stimulating ways	4.50	0.71

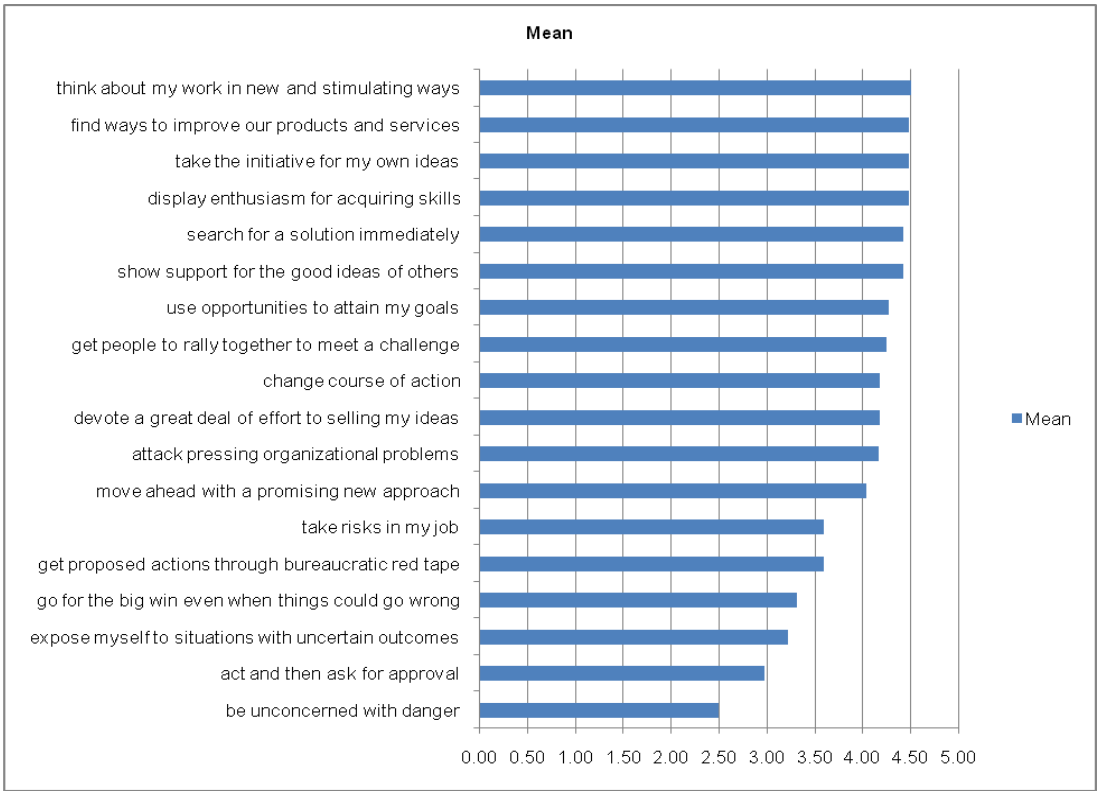

Figure 8: Bar graph of elevated intrapreneurial behaviour means

Table 5: Means and standard deviation of risk control scale

Risk control items	Means	SD
use no borrowing or little borrowing	3.22	1.14
encourage lesser level financial and personal risk-taking	3.24	1.18
strong proclivity for low risk projects	3.38	1.17
owing to nature of environment, it's best to explore it gradually	3.50	1.00
avoid taking actions without research and planning	3.70	1.16
assess risk factors to minimize uncertainty	3.83	1.06
apply techniques and processes that have worked in other domains	3.94	0.96

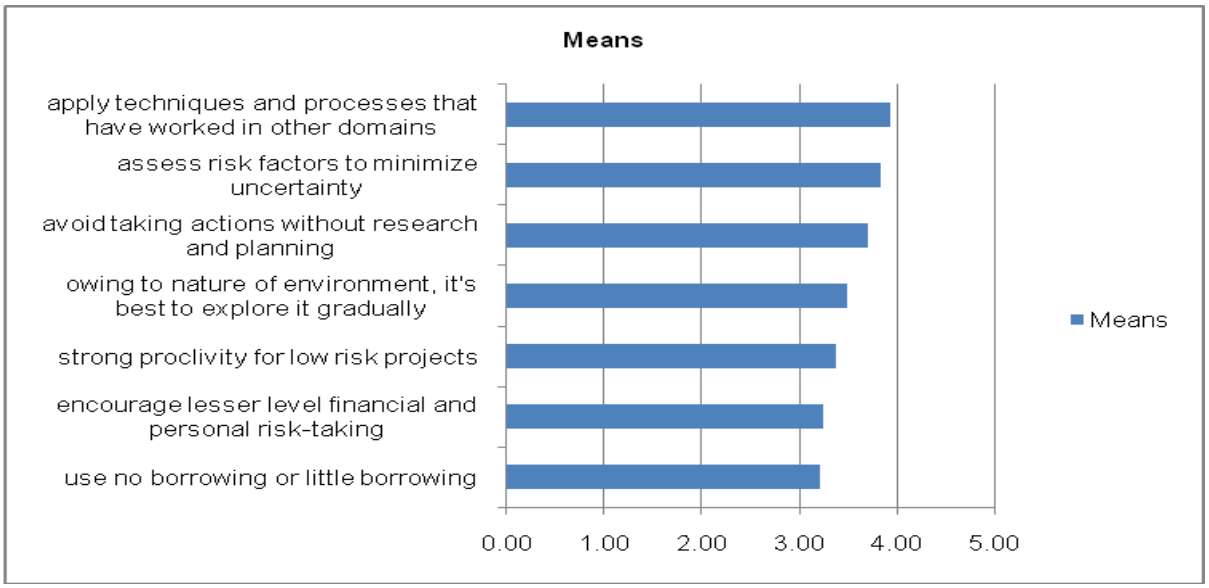

Figure 9: Bar graph of department's risk control means

The midpoint of the EEIB scale was 3. As shown in Table 4, scores below the midpoint suggested low intrapreneurial behaviour while scores above the midpoint suggested elevated intrapreneurial behaviour. Two scores (unconcerned with danger = 2.49, first act and then ask for approval = 2.98) were below the midpoint which suggested that employees were generally worried about danger and acting without approval when they engaged in innovative activities. All the other scores were above the midpoint and ranged from 3.22 to 4.5, suggesting that employees perceived that they will act intrapreneurially despite their concerns about danger and approval issues.

The midpoint of the DRC scale was 3. As shown in Table 5, scores below the midpoint suggested risk maximization strategies and scores above the midpoint suggested risk minimization strategies. All the means were above the midpoint and ranged from 3.22 to 3.94. This suggested that employees generally believed that their departments implemented risk minimization strategies.

4.3 Statistical test results

4.3.1 Actual compensation practices versus desired compensation practices

A t-test for dependent or related groups was performed to check for differences between actual and desired compensation practices. From Figure 10 and Table 6, it was evident that significant gaps existed between actual compensation practices and desired compensation practices for elevating intrapreneurial behaviour.

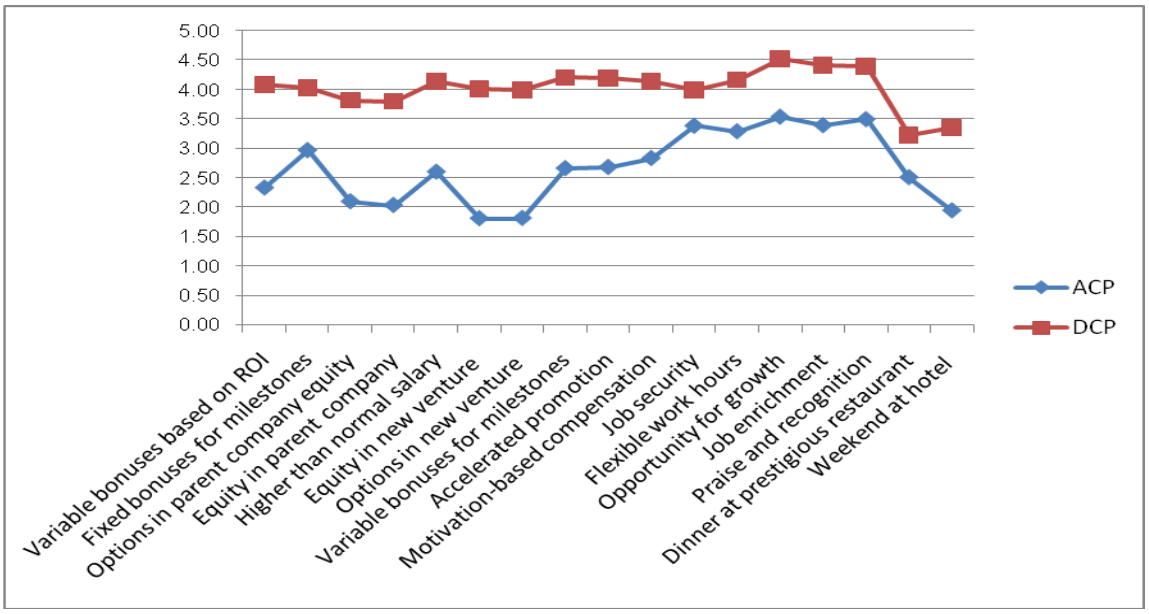

Figure 10: Means of actual compensation practices versus desired compensation practices

Table 6: Actual and desired compensation practices for intrapreneurs (*t*-test dependent samples); Marked differences are significant at p < .0500, N = 209

Compensation practices	Actual compensation practices				Desired compensation practices			
(Range from 1 to 5)	Mean	SD	t	p	Mean	SD	t	p
Variable bonuses based on ROI of new venture formed from the intrapreneur's idea	2.33	1.27	-15.65	0.000000	4.08	0.91	-15.65	0.000000
Fixed bonuses for milestone achievement	2.97	1.33	-9.86	0.000000	4.02	1.01	-9.86	0.000000
Options in parent company equity	2.10	1.30	-15.03	0.000000	3.82	1.07	-15.03	0.000000
Equity in parent company	2.03	1.18	-15.79	0.000000	3.80	1.09	-15.79	0.000000
Higher than normal salary	2.60	1.18	-14.77	0.000000	4.14	0.99	-14.77	0.000000
Equity in new venture formed from the intrapreneur's idea	1.81	1.05	-21.76	0.000000	4.00	1.04	-21.76	0.000000
Options in new venture equity	1.81	1.01	-22.45	0.000000	4.00	0.94	-22.45	0.000000
Variable bonuses for milestone achievement	2.66	1.27	-15.09	0.000000	4.20	0.89	-15.09	0.000000
Accelerated promotion	2.68	1.08	-15.43	0.000000	4.19	0.93	-15.43	0.000000
Motivation-based compensation	2.84	1.19	-12.22	0.000000	4.13	0.98	-12.22	0.000000
Job security	3.39	1.13	-6.16	0.000000	3.99	1.09	-6.16	0.000000
Flexible work hours	3.29	1.34	-7.63	0.000000	4.16	1.02	-7.63	0.000000
Opportunity for growth	3.54	1.05	-11.07	0.000000	4.52	0.78	-11.07	0.000000
Job enrichment	3.40	1.07	-10.67	0.000000	4.41	0.81	-10.67	0.000000
Praise and recognition	3.50	1.04	-9.56	0.000000	4.39	0.95	-9.56	0.000000
Dinner at a prestigious restaurant	2.51	1.20	-6.85	0.000000	3.23	1.27	-6.85	0.000000
Weekend at a hotel in South Africa or abroad	1.94	1.20	-14.15	0.000000	3.36	1.30	-14.15	0.000000

Generally, all the compensation practices were preferred by employees to elevate intrapreneurial behaviour. However, most respondents believed that there was a large gap between actual and desired compensation practices. For example, the incidence of options in new venture equity was low (mean = 1.81), in contrast with its perceived desirability (mean = 4.00).

4.3.2 Actual compensation practices versus elevated intrapreneurial behaviour

To examine the relationship between ACP and EEIB (hypothesis 1), a canonical analysis was carried out. The results are shown in Tables 7, 8, and 9.

Table 7: Total redundancy for actual compensation practices versus elevated intrapreneurial behaviour

Canonical R: .58, p=0.00011, N=209		
	Actual compensation practices (ACP), left set	Elevated intrapreneurial behaviour (EEIB), right set
Number of variables	17	18
Variance extracted	100.00%	96.96%
Total redundancy	11.75%	9.89%

Some definitions are necessary in order to understand canonical analysis. They include the following:

- Canonical variates: Linear combinations that represent the optimally weighted sum of all the variables formed for both dependent and independent variables in each canonical function (Hair et al, 2010:236).
- Canonical R: This is the canonical correlation coefficient and it measures the strength of the overall relationship between two canonical variates (for example, ACP and EEIB).
- Canonical roots/eigenvalues: These are squared canonical correlation coefficients, which give an estimate of the amount of shared variance between the respective canonical variates.

- Variance extracted: This represents the amount of variance extracted from the variables in the respective set by all canonical roots.
- Redundancy index: This is the amount of variance in a canonical variate (dependent or independent) explained by the other canonical variate in the canonical function (Hair et al, 2010:236).

The overall canonical R (.58) was reasonably substantial (StatSoft, 2011) and highly significant ($p < .0010$). This value was the simple correlation between the weighted sum scores in each set of variables, with the weights pertaining to the first (and most significant) canonical root. It is important to note that the maximum number of canonical roots that could be extracted was equal to the smallest number of variables in either set (Statsoft, 2011), thus, 17 canonical roots were extracted. All 17 canonical roots extracted 100% of the variance from the left set (17 ACP items) and 97% of the variance in the right set (EEIB items). The total redundancy for the ACP items was 11.75%, while that of the EEIB items was 9.98%. This meant that based on all canonical roots and given the EEIB items, 11.75% of the variance in the ACP was accounted for, while given the ACP items, 9.89% of the variance in the EEIB was accounted for. These results revealed a very poor but significant latent root and suggested a very weak overall relationship between items in the two sets of variables. From the analysis, only the first canonical root was significant (Appendix 2) and was thus examined further and the results are shown in Tables 8 and 9. The second root was statistically non-significant and was excluded from further analysis.

Table 8: Actual compensation practices and elevated intrapreneurial behaviour (canonical analysis, n = 209)

Actual compensation practices	Root 1	Elevated intrapreneurial behaviour	Root 1
Job security	-0.02	get proposed actions through bureaucratic red tape	-0.02
Higher than normal salary	-0.04	take initiative for my own ideas	-0.03
Equity in parent company	-0.10	Show support for the good ideas of others	-0.04
Weekend at a hotel in South Africa or abroad	-0.11	First act and then ask for approval, even when I know that will annoy other people	-0.07
Equity in new venture formed from the intrapreneur's idea	-0.12	Get people to rally together to meet a challenge	-0.07
Options in parent company equity	-0.17	Search for a solution immediately something goes wrong	-0.08
Options in new venture equity	-0.20	Often take risks in my job	-0.17
Flexible work hours	-0.44	quickly change course of action when results are not being achieved	-0.18
Accelerated promotion	0.02	Actively attack pressing organizational problems	-0.19
Job enrichment	0.09	Unconcerned with danger	-0.31
Fixed bonuses for milestone achievement	0.11	Boldly move ahead with a promising new approach when others might be more cautious	-0.38
Praise and recognition	0.11		
Dinner at a prestigious restaurant	0.21	Regularly go for the big win even when things could seriously go wrong	0.04
Motivation-based compensation	0.23	Willingly expose myself to situations with uncertain outcomes	0.07
Opportunity for growth	0.23	Think about my work in new and stimulating ways	0.11
Variable bonuses for milestone achievement	0.24	Find ways to improve our products and services	0.13
Variable bonuses based on ROI of new venture formed from the intrapreneur's idea	0.26	Use opportunities quickly in order to attain my goals	0.14
		display an enthusiasm for acquiring skills	0.17
		Devote a great deal of effort to selling my ideas	0.18

Table 9: Variance of root 1 extracted (proportions)

Root factor	Variance extracted (ACP)	Redundancy (ACP)	Variance extracted (EEIB)	Redundancy (EEIB)
Root 1	0.042929	0.014255	0.026032	0.008644

The interpretation of the canonical factors followed a similar logic to that employed in factor analysis (Statsoft, 2011). The factor structures in Table 8 are also referred to as canonical loadings or structure coefficients. Nine items of the ACP variable revealed low loadings on the first canonical factor ranging from 0.02 to 0.26, while eight items had negative loadings; that is, they had a very low correlation with that factor. Seven items of the ACP variable revealed low loadings on the first canonical factor ranging from 0.04 to 0.18 while 11 items had negative loadings; that is, they had a very low correlation with that factor. From Table 9, the first canonical root extracted an average of 4% of the variance from the ACP items and an average of 3% of the variance from the EEIB items. Given the EEIB items, the first canonical root accounted for about 1% of the variance in the ACP items (redundancy). Given the ACP items, the first canonical root accounted for about 0.9% of the variance in the EEIB items. The results in Tables 8 and 9 revealed that the set of items in the ACP variable were not predicting the set of items in the EEIB variable, thus hypothesis 1 was not supported.

4.3.3 Desired compensation practices versus elevated intrapreneurial behaviour

To examine the relationship between DCP and EEIB (hypothesis 2), a canonical analysis was carried out. The results are shown in Tables 10, 11, and 12.

Table 10: Total redundancy for desired compensation practices versus elevated intrapreneurial behaviour

Canonical R:.70, p=0.0000, N=209		
	Desired compensation practices (left set)	Elevated intrapreneurial behaviour (right set)
Number of variables	17	18
Variance extracted	100.00%	96.96%
Total redundancy	21.08%	25.07%

Compared to the canonical correlation results between ACP and EEIB, the results of the DCP and EEIB relation appeared to be stronger. The overall canonical R (.70) was quite substantial (StatSoft, 2011) and highly significant ($p < .0010$). This value was the simple correlation between the weighted sum scores in each set of variables, with the weights pertaining to the first (and most significant) canonical root. Seventeen canonical roots were extracted. All 17 canonical roots extracted 100% of the variance from the left set (17 DCP items) and 97% of the variance in the right set (EEIB items). The total redundancy for the DCP items was 21.08%, while that of the EEIB items was 25.07%. This meant that based on all canonical roots and given the EEIB items, 21.08% of the variance in the DCP was accounted for, while given the DCP items, 25.07% of the variance in the EEIB was accounted for. These results revealed a poor but significant latent root and suggested a weak overall relationship between items in the two sets of variables. From the analysis, only the first canonical root was significant (Appendix 3) and thus, it was examined further and the results are shown in Tables 11 and 12. The second root was statistically non-significant and was excluded from further analysis.

Table 11: Desired compensation practices and elevated intrapreneurial behaviour (canonical analysis, n = 209)

Desired compensation practices	Factor structure of root 1	Elevated intrapreneurial behaviour	Factor structure of root 1
Higher than normal salary	0.15	First act and then ask for approval, even when I know that will annoy other people	0.1
Equity in parent company	0.18	Unconcerned with danger	0.16
Fixed bonuses for milestone achievement	0.19	Willingly expose myself to situations with uncertain outcomes	0.19
Weekend at a hotel in South Africa or abroad	0.22	get proposed actions through bureaucratic red tape	0.28
Dinner at a prestigious restaurant	0.26	Regularly go for the big win even when things could seriously go wrong	0.33
Variable bonuses based on ROI of new venture formed from the intrapreneur's idea	0.34	Find ways to improve our products and services	0.46
Options in new venture equity	0.36	Often take risks in my job	0.51
Job security	0.38	Boldly move ahead with a promising new approach when others might be more cautious	0.53
Options in parent company equity	0.46	display an enthusiasm for acquiring skills	0.54
Equity in new venture formed from the intrapreneur's idea	0.49	Actively attack pressing organizational problems	0.59
Praise and recognition	0.51	Devote a great deal of effort to selling my ideas	0.61
Motivation-based compensation	0.52	quickly change course of action when results are not being achieved	0.63
Flexible work hours	0.53	Think about my work in new and stimulating ways	0.69
Job enrichment	0.53	Show support for the good ideas of others	0.73
Variable bonuses for milestone achievement	0.61	Search for a solution immediately something goes wrong	0.76
Accelerated promotion	0.64	Use opportunities quickly in order to attain my goals	0.77
Opportunity for growth	0.71	take initiative for my own ideas	0.78
		Get people to rally together to meet a challenge	0.79

Table 12: Variance of root 1 extracted (proportions)

Root factor	Variance extracted (DCP)	Redundancy (DCP)	Variance extracted (EEIB)	Redundancy (EEIB)
Root 1	0.200597	0.099502	0.323595	0.160513

The factor structures in Table 11 are also referred to as canonical loadings or structure coefficients. The items of the EEIB variable ranged from 0.1 to 0.79. The 12 items with the highest loadings ranged from 0.51 to 0.79. Of these 12 items, 11 were items measuring innovation and proactiveness while one item measured risk. Therefore, innovation and proactiveness were good representatives of EEIB. The items of the DCP variable had loadings ranging from 0.15 to 0.71. The seven items with the highest loadings were praise and recognition, motivation-based compensation, flexible work hours, job enrichment, variable bonuses for milestone achievement, accelerated promotion, and opportunity for growth. These seven items correlated highly with that factor. Of these seven items, six were are all non-monetary compensation practices, meaning the non-monetary compensation practices were the best predictors of the 11 items measuring innovation and proactiveness.

From Table 12, the first canonical root extracted an average of 20% of the variance from the DCP items and an average of 32% of the variance from the EEIB items. Given the EEIB items, the first canonical root accounted for about 10% of the variance in the DCP items (redundancy). Given the DCP items, the first canonical root accounted for about 16% of the variance in the EEIB items. The results in Tables 10, 11, and 12 revealed that the significant canonical correlation (0.70) between the items in the two sets (based on the first canonical root) was probably the result of a relationship between non-monetary compensation practices, and innovation and proactiveness. The set of items in the DCP variable that best

predicted the 11 EEIB items on innovation and proactiveness were the non-monetary compensation practices. Thus, hypothesis two was not supported.

4.3.4 Moderation analysis

To examine the moderating effect of department's risk control on the DCP-EEIB relationship (hypothesis 3), a multiple regression was executed incorporating the interaction term of risk*DCP. The first canonical roots of DCP served as the independent variable while the first canonical root of EEIB served as the dependent variable. An interaction term was created for each respondent by multiplying the averages of the responses on the risk control scale with the corresponding first canonical roots of the DCP items. The results are shown in Table 13:

Table 13: Regression summary for dependent variable (elevated intrapreneurial behaviour 1st canonical root)

R = .71, R^2 = .50, Adjusted R^2 = .49, p < 0.0000, Std. Error of estimate: .71 F (2,196) = 99.36						
N = 199	b*	Std. Err. of b*	b	Std. Err. of b	t (196)	p-value
Intercept			0.01687	0.05129	0.32888	0.74260
DCP (1st canonical root)	1.12504	0.25124	1.12504	0.25124	4.47792	0.00001
Interaction term (risk*DCP)	-0.42945	0.25124	-0.12631	0.07389	-1.70932	0.08896

Based on the above model, an R^2 of 0.50 was obtained and the explained variance of this regression model was statistically significant ($p<0.001$). This model indicated that 50.34% of the variation in the dependent variable (EEIB) was attributable to variation across the desired compensation practices items. However, the moderation effect of risk control was not statistically significant when risk control was used as a moderator. The p-value for the regression model was not statistically significant ($t(196) = -1.7093$, $p>0.05$) and should thus be removed from the model. This suggested that risk control did moderate the DCP-EEIB relationship and therefore hypothesis 3 was not supported.

In summary, the main findings of this research included the following:

- Gaps existed between actual compensation practices and what employees perceive to be the desired compensation practices for elevating intrapreneurial behaviour.
- Desired compensation practices (non-monetary compensation practices) were the best predictors of elevated intrapreneurial behaviour (innovation and proactiveness).
- There was lack of sufficient evidence to conclude that departmental risk control moderated the relationship between DCP and EEIB.

4.4 Study limitations

The study limitations were as follows:

- Due to cost and time-constraints, non-probability convenience sampling was used and with such a sampling method, it was not possible to assess sampling errors, nor was it possible to assess whether the sample was representative of the specific population. By using a non-probability convenience sampling technique, the more convenient elementary units were

chosen from the population for observation. This kind of sampling is the least reliable (Cooper and Schindler, 2008).

- An organization is a micro-level unit of analysis made up of different individuals and business activities. As such, the issues of relevance, size, industry, size distributions, and heterogeneity need to be acknowledged (Davidsson, 2004). Also, Chandler et al (2000) note that each firm works in a different task environment making the relationship between innovation-supportive cultures of organizations a difficult one to explore. The researcher did not control for the environment/industry given that respondents from organizations in many different industries were used.
- This research was also prone to bias since the survey was self-reported.
- This research attempted to predict the compensation practices that could elevate intrapreneurial behaviour, but usually, the prediction of attitudes or behaviours is generally weak because the correlations involving attitude scales are substantially attenuated due to unreliability (Treiman, 2009).
- The researcher used canonical analysis. However, when the number of variables in one of the data sets is high (which was the case in this research), the weights obtained by canonical analysis may be unreliable (Lerner et al, 2009).

CHAPTER 5: CONCLUSIONS AND IMPLICATIONS

5.1 Discussion

Previous studies suggest that compensation is an important component of the strategy of organizations wishing to promote entrepreneurship among their employees (Lerner et al, 2009; Chandler et al, 2000; Gautam and Verma, 1997; Hornsby et al, 1993; Block and Ornati, 1987). This research analyzed the role of compensation practices in elevating employees' intrapreneurial behaviour in the various organizations under study. In addition, the moderating role of department's risk control on the DCP-EEIB relationship was also examined. The results revealed that organizations were not properly using desired compensation practices to elevate employees' intrapreneurial behaviour.

The results clearly revealed that gaps existed between employee's perception of the desired compensation practices and the actual compensation practices existing in the various organizations. In addition, intrapreneurs preferred mostly non-monetary compensation practices like job enrichment, opportunity for growth, flexible work hours, motivation-based compensation, and accelerated promotion. The main outcome-based compensation practice preferred by intrapreneurs was variable bonuses for milestones achievement.

Lerner et al (2009:74) found that intrapreneurs preferred compensation practices related to both the internal venture's performance and their own performance (outcome-based compensation practices) while Jones and Butler (1992:744) state that outcome-based compensation practices are necessary to promote the bearing of uncertainty and reduction of opportunism. Consistent with agency theory, outcome-based compensation practices aligns the preferences of agents and principals because the rewards for both parties depend on the same actions. In

contrast, findings from this research indicated that intrapreneurs mostly preferred non-monetary compensation practices. Reasons for this inconsistency could be due to the research design used. Lerner et al (2009) focused their research on employees and managers of a large Israeli government-owned defense organization, employing over 2000 personnel in producing electronic systems. This research was conducted in South Africa whose employees have a different cultural setup from employees in Israel. Also, the researcher used employees from many different organizations operating in different industries and the survey instrument used by Lerner et al (2009) did not include the kind of non-monetary compensation practices used in this research.

One of the reasons why employees preferred the non-monetary over the outcome-based compensation practices could be because they felt that their organizations did not have the means, ability, or desire to compensate them in that manner. It could also be due to the fact that most organizations reserve outcome-based compensation practices for directors and executives who, for personal gains, might not be willing to share such benefits with floor level employees.

Another important reason is found in the literature on strategy. Yanadori and Marler (2006) conducted a study on high-technology organizations and examined whether the organization's business strategy influenced its compensation systems. They found that the greater the emphasis on innovation, the higher the relative pay level of research and development employees compared to other employees. In other words, organizations with an innovation strategy in place will likely design outcome-based compensation practices for employees who are involved in innovative activities. In addition, Amo and Kolvereid (2005:17) found that an organization's strategic orientation toward corporate entrepreneurship was significantly positively related to innovation behaviour. The current study did not examine the innovative strategy of the organizations under study and thus if most of these organizations do not have an innovation strategy, then outcome-based compensation practices might not form part of the compensation package for employees. In such a scenario,

employees will naturally prefer non-monetary compensation practices as this is what the organization might present to them.

The results of this study are consistent with those of Monsen et al (2009:119) who found that getting employees to participate in a new venture was not just a matter of financial utility maximization. Non-outcome-based measures like pay risk, job risk, and expectations of success played a role in determining whether employees decided to be innovative or not. For example, the positive relationship between profit sharing bonus (outcome-based) and employees' participation in a new venture was negatively moderated by job risk and pay risk, and positively moderated by an employee's expectation of success in the new venture (Monsen et al, 2009). In other words, it is important for job risk and pay risk to be low when using profit sharing bonus to motivate employees to participate in a new venture. Job risk can be decreased through flexible work hours, opportunity for growth, and job enrichment. These items constituted the best predictors of elevated intrapreneurial behaviour in the current study.

The current study found that opportunity for growth and job enrichment were good predictors of EEIB. These are two measures that can be attained through on-the-job training or external training arranged by the organization for its employees. This finding is consistent with Amo and Kolvereid (2005:17) who found that intrapreneurial personality was significantly positively associated with innovative behaviour, and thus it is important for organizations to train their employees in innovation and entrepreneurship.

There is a mixed finding with regard to accelerated promotion. Accelerated promotion might bring more financial gain through higher salary, but if done often, the employee might climb up the organizational ladder too quickly without the necessary skills to occupy the new position. In this case, job risk might be increased and will negatively affect the employee's participation in innovative activities. This is

confirmed by Lerner et al (2009) who found that accelerated promotion was negatively correlated with the activities associated with intrapreneurial behaviour. In contrast, the current study found accelerated promotion to be one of the predictors of EEIB.

Furthermore, Zenger and Lazzarini (2004) found that relative to large firms, small firms were more likely to have employees with a substantial percentage of their compensation explicitly paid as variable bonus. In contrast, the current study found that variable bonus for milestones achievement was also preferred by intrapreneurs in large organizations (69% of the respondents were from large organizations while only 17% were from small organizations). Of the outcome-based compensation practices examined in this study, variable bonuses for milestones achievement was the most important in predicting elevated intrapreneurial behaviour. This result is confirmed by some earlier research that examined high-technology reward systems. For example, Balkin and Gomez-Mejia (1987) found that technology managers, scientists, engineers, and other research and development employees were likely to have a portion of their pay contingent on the achievement of technology milestones.

Regarding risk control, the researcher found that department's risk control did not moderate the DCP-EEIB relationship. This finding is consistent with Goodale et al. (2010) who found that the relationship between rewards and innovation performance was not affected by risk control. At the same time however, Goodale et al. (2010:9) found that risk control had a strong positive moderating effect on the relationship between organizational boundaries and innovation performance, but a strong negative moderating effect on the relationship between time availability and innovation performance. The theoretical implication is that desired compensation practices are not the only organizational antecedent that can elevate intrapreneurial behaviour. Other organizational antecedents like organizational support, organizational boundaries, and time availability are equally important to consider (Goodale et al, 2010).

5.2 Relevance of findings

Generally, the variance of elevated intrapreneurial behaviour explained by desired compensation practices was very low, suggesting that desired compensation practices did not have much impact on elevated intrapreneurial behaviour. This finding suggests that it is not sufficient to use only compensation to elevate intrapreneurial behaviour. Rather, compensation systems should be an integral part of an overall entrepreneurial strategy of the organization. Therefore, any South African organization that wants to elevate their employees' intrapreneurial behaviour must be fully committed to corporate entrepreneurship at the strategy level of the organization.

Numerous problems face organizations trying to link rewards to entrepreneurial performance. Jones and Butler (1992:746) suggest that the ability of firms to align compensation to the changing conditions in the principal/agent relationship can prevent the intrapreneurial spirit from lapsing. The current results challenge South African organizations wishing to have intrapreneurial employees to place more emphasis on understanding what intrapreneurial employees really want rather than what they have in a compensation policy.

5.3 Further research

Chandler et al (2000) showed that the relationship between innovation-supportive culture of organizations and their implications is extremely complex to explore, as each organization works in a different task environment. In addition, research has suggested that compensation systems in high-technology organizations are distinct from those in other industries (Balkin and Gomez-Mejia, 1987). Therefore, in order to have a better understanding of the relationship between compensation and innovation, future studies should focus on a single industry.

Hayton (2005:25) suggests that the need to encourage risk averse employees to innovate is moderated by the degree of uncertainty associated with the environment. Department's risk control as used in this research is an operations control variable and might not be a good measure of environmental uncertainty. Future studies should focus on establishing an empirical measure of the level of uncertainty in the organization's industry and examine whether this moderates the compensation-innovation relationship.

REFERENCES

Alvarez, S. A. and Busenitz, L. W. (2001) The entrepreneurship of resource-based theory, *Journal of Management,* 27, 755-775.

Amo, B. W. and Kolvereid, L. (2005) Organizational strategy, individual personality and innovation behavior, *Journal of Enterprising Culture,* 13(1), 7-19.

Antoncic, B. (2007) Intrapreneurship; a comparative structural equation modeling study, *Industrial Management and Data Systems,* 107(3), 309-325.

Antoncic, B. and Hisrich, R. D. (2003) Clarifying the intrapreneurship concept, *Journal of Small Business and Enterprise Development,* 10(1), 7-24.

Antoncic, B. and Hisrich, R. D. (2000) Intrapreneurship modeling transition economies: A comparison of Slovenia and the United States, *Journal of Developmental Entrepreneurship*, 5(1), 21-40.

Balkin, D. B., Markman, G. D. and Gomez-Mejia, L. R. (2000) Is CEO pay in high-technology firms related to innovation? *Academy of Management Journal,* 43(6), 1118–1129.

Balkin, D. B. and Bannister, B. D. (1993) Explaining pay forms for strategic employee groups in organizations: A resource dependence perspective, *Journal of Occupational and Organizational Psychology,* 66(2), 139–151.

Balkin, D. B. and Gomez-Mejia, L. R. (1987) Toward a contingency theory of compensation strategy, *Strategic Management Journal,* 8(2), 169–182.

Balkin, D. B. and Gomez-Mejia, L. R. (1984) Determinants of R&D compensation strategies in the high tech industry, *Personnel Psychology,* 37(4), 635–640.

Barney, J. and Hesterly, W. (1996) 'Organizational economics: Understanding the relationship between organizations and economic analysis', In Clegg, S., Hardy, C. and Nord, W. R. (ed.), *Handbook of organization studies,* Thousand Oaks, CA, 115-147.

Barney, J. (1991) Firm resources and sustained competitive advantage, *Journal of Management,* 17(1), 99-120.

Beatty. R. P. and Zajac, E. J. (1994) Managerial incentives, monitoring, and risk bearing: A study of executive compensation, ownership, and board structure in initial public offerings, *Administrative Science Quarterly,* 39(2), 313-335.

Becherer, R. C. and Mauer, J. G. (1999) The proactive personality disposition and entrepreneurial behavior among small business presidents, *Journal of Small Business Management,* 37(1), 28-36.

Block, Z. and Ornati, O. A. (1987) Compensating corporate venture managers, *Journal of Business Venturing,* 2(1), 41–51.

Bosma, N. and Levie, J. (2009) *Global Entrepreneurship Monitor,* Entrepreneurship report, Babson College, United States.

Brazeal, D. V. (1993) Organizing for internally developed corporate ventures, *Entrepreneurship Theory and Practice,* 8(1), 75–90.

Brizek, G. M. and Khan, A. M. (2008) Understanding corporate entrepreneurship theory; a literature review for culinary food service academic practitioners, *Journal of Culinary Science and Technology,* 6(4), 221-255.

Brown, C. C. (1990) ‘The choice of method of pay’, In Ehrenberg, R. G. (ed.) *Do Compensation Policies Matter?,* The ILR Press: Cornell University.

Brundin, E., Patzelt, H. and Shepherd, D. A. (2008) Managers’ emotional displays and employees’ willingness to act entrepreneurially, *Journal of Business Venturing,* 23, 221-243.

Busenitz, L. and Barney, J. (1997) Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making. *Journal of Business Venturing, 12,* 9–30.

Bygave, W. D. (1993) Theory building in the entrepreneurship paradigm, *Journal of Business Venturing*, 8(3), 255–280.

Campbell, D. J. (2000) The proactive employee: Managing workplace initiative, *Academy of Management Journal,* 14(3), 52-66.

Carrier, C. (1996) Intrapreneurship in small businesses: An exploratory study, *Entrepreneurship Theory and Practice,* 20(1), 5–20.

Chandler, G. N. and Lyon, D. W. (2001) Issues of research design and construct measurement in entrepreneurship research: The past decade, *Entrepreneurship Theory and Practice,* 25(4), 101-113.

Chandler, G. N., Keller, C. and Lyon, D. W. (2000) Unravelling the determinants and consequences of an innovation-supportive organizational culture, *Entrepreneurship Theory and Practice,* 25(1), 59–76.

Coldwell, D. and Herbst, F. (2004) *Business Research,* First edition, Creda Communications, Cape Town.

Cooper, D. R. and Schindler, P.S. (2008) *Business Research Practices,* Tenth edition, McGraw-Hill, Boston.

Cortina, J. M. (1993) What is coefficient alpha? An examination of theory and applications, *Journal of Applied psychology,* 78(1), 98-104.

Covin, J. G. and Miles, M. P. (1999) Corporate entrepreneurship and the pursuit of competitive advantage, *Entrepreneurship Theory and Practice,* 23(3), 47–63.

Damanpour, F. (1991) Organizational innovation: A meta-analysis of effects of determinant and moderators, *Academy of Management Journal*, 34(3), 555–590.

Das, S. R. and Joshi, M. P. (2007) Process innovativeness in technology services organizations: Roles of differentiation strategy, operational autonomy and risk-taking propensity, *Journal of Operations Management,* 25(3), 643–660.

Davidsson, P. (2004) *Researching entrepreneurship,* First edition, Springer Science and Business Media, Boston.

Dess, G. G., Lumpkin, G. T. and McGee, J. E. (1999) Linking corporate entrepreneurship to strategy, structure, and process: Suggested research directions, *Entrepreneurship Theory and Practice,* 23, 3-85.

Dorsey, D. and Jacob, K. (2005) *Financial Services Trends and Recent Innovations in South Africa: Lessons for the United States,* Finance, 1, The Centre for Financial Services Innovation, Chicago.

Edralin, M. D. (2010) Human resource management practices: drivers for stimulating corporate entrepreneurship in large companies in the Phillipines, *DLSU Business and Economic Review,* 19(2), 24-41.

Eisenhardt, K. M. (1989) Agency theory: An assessment and review, *Academy of Management Review,* 14(1), 57-74.

Ellis, S. C., Henry, R. M. and Shockley, J. (2010) Buyer perceptions of supply disruption risk: A behavioural view and empirical assessment, *Journal of Operations Management,* 28(1), 34–46.

Floyd, S. W. and Wooldridge, B. (1999) Knowledge creation and social networks in corporate entrepreneurship: The renewal of organizational capability, *Entrepreneurship Theory and Practice,* 23(3), 123–144.

Frese, M., Fay, D., Hilburger, T., Leng, K. and Tag, A. (1997) The concept of personal initiative: Operationalization, reliability and validity in two German samples, *Journal of Occupational and Organizational Psychology*, 70, 139-161.

Gautam, V. and Verma, V. (1997) Corporate entrepreneurship: Changing perspectives, *Journal of Entrepreneurship,* 6(2), 233-247.

Gilley, K. M., Walters, B. A. and Olson, B. J. (2002) Top management team risk taking propensities and firm performance: Direct and moderating effects, *Journal of Business Strategies,* 19(2), 95-114.

Goodale, J. C., Kuratko, D. F., Hornsby, J. S. and Covin, J. G. (2010) Operations management and corporate entrepreneurship: The moderating effect of operations control on the antecedents of corporate entrepreneurial activity in relation to innovation performance, *Journal of Operations Management,* doi: 10.1016/j.jom.2010.07.005.

Greene, P. G., Brush, C. G. and Hart, M. M. (1999) The corporate venture champion: A resource based approach to role and process, *Entrepreneurship Theory and Practice*, 23(3), 103-122.

Grimm, L. G. and Yarnold, P. R. (1995) *Reading and understanding multivariate statistics,* American Psychological Association, Washington.

Guest, D. E. (1999) Human resource management: The workers' verdict, *Human Resource Management Journal,* 9(3), 5-25.

Guest, D. E. (1997) Human resource management and performance, *The International Journal of Human Resource Management,* 8(3), 265-274.

Guest, D. E. (1987) Human resource management and industrial relations, *Journal of Management Studies,* 24(5), 503-524.

Guth, W. D. and Ginsberg, A. (1990) Guest editors' introduction: corporate entrepreneurship, *Strategic Management Journal*, 11(4), 5–15.

Hair, J. F., Black, W. C., Babin, B. J. and Anderson, R. E. (2010) *Mutivariate Data Analysis,* Seventh edition, Pearson, New Jersey.

Hayton, C. J. (2005) Promoting corporate entrepreneurship through human resource management practices: A review of empirical research, *Human Resource Management Review,* 15(1), 21-41.

Hendry, C. and Pettigrew, A. (1990) Human resource management: an agenda for the 1990's, *International Journal of Human Resource Management,* 1(1), 17-43.

Hornsby, J. S., Kuratko, D. F. and Zahra, S. A. (2002) Middle managers' perception of the internal environment for corporate entrepreneurship: Assessing a measurement scale, *Journal of Business Venturing,* 17(3), 253–273.

Hornsby, J. S., Kuratko, D. F. and Montagno, R. V. (1999) Perception of internal factors for corporate entrepreneurship: A comparison of Canadian and U.S. managers, *Entrepreneurship Theory and Practice,* 24(2), 9-24.

Hornsby, J. S., Naffziger, D. W., Kuratko, D. F. and Montagno, R. V. (1993) An interactive model of the corporate entrepreneurship process, *Entrepreneurship Theory and Practice,* 17(2), 29-37.

Jennings, R., Cox, C. and Cooper, C. L. (1994) *Business elites; The psychology of entrepreneurs and intrapreneurs*, Routlegde, London.

Jennings, D. F. and Young, D. M. (1990) An empirical comparison between objective and subjective measures of the product innovation domain of corporate entrepreneurship, *Entrepreneurship Theory and Practice*, 15(1), 6-20.

Jennings, D.F. and Lumpkin, J. R. (1989) Functioning modelling corporate entrepreneurship: An empirical integrative analysis, *Journal of Management,* 15(3), 485–502.

Jones, G. R. and Butler, J. E. (1992) Managing internal corporate entrepreneurship: an agency theory perspective, *Journal of Management,* 18(4), 733–749.

Jong, J. and Wennekers, S. (2008) *Conceptualizing entrepreneurial employee behaviour*, Intrapreneurship, H200802, EIM, Netherlands.

Kanter, R. M. (1984) *The Change Masters,* New York: Simon and Schuster.

Kaya, N. (2006) The impact of human resource management practices and corporate entrepreneurship on firm performance: evidence from Turkish firms, *International Journal of Human Resource Management,* 17(12), 2074-2090.

Kuhn, K. M. (2009) Compensation as a signal of organizational culture: the effects of advertising individual or collective incentives, *The International Journal of Human Resource Management,* 20(7), 1634-1648.

Kuhn, K. M. and Yockey, M. (2003) Variable pay as a risky choice: Determinants of the relative attractiveness of incentive plans, *Organizational Behavior and Human Decision Processes*, 90, 323–341.

Kuratko, D. F., Montagno, R. V. and Hornsby, J. S. (1990) Developing an intrapreneurial assessment instrument for an effective corporate entrepreneurial environment, *Strategic Management Journal,* ll (summer), 28-49.

Lerner, M., Azulay, I. and Tishler, A. (2009) The role of compensation practices in corporate entrepreneurship, *International Studies of Management and Organization,* 39(3), 53-81.

Lerner, J. and Wulf, J. (2007) Innovation and incentives: Evidence from corporate R&D, *The Review of Economics and Statistics,* 89(4), 634-644.

Liao, Y. (2005) Business strategy and performance: The role of human resource management control, *Personnel Review,* 34(3), 294-306.

Lumpkin, G. T. and Dess, G. G. (1996) Clarifying the entrepreneurial orientation construct and linking it to performance, *Academy of Management Review,* 21(1), 135-172.

Manolova, T. S., Brush, C. G. and Edelman, l. F. (2008) What do women entrepreneurs want?, *Strategic Change,* 17, 69-82.

Mayer, J. D. and Salovey, P. (1997) 'What is emotional intelligence? Implications for educators', In Salovey, P. and Sluyter, D. (ed.), *Emotional Development, Emotional Literacy, and Emotional Intelligence*, Basic Books, New York.

Mbeki, M. (2004) *The private sector, political elites and underdevelopment in Sub-Saharan Africa*, SAIIA report, University of Witwatersrand, Johannesburg.

Miller, D. and Friesen, P. H. (1982) Innovation in conservative and entrepreneurial firms: two models of strategic momentum, *Strategic Management Journal,* 3, 1-25.

Monsen, E., Patzelt, H. and Saxton, T. (2009) Beyond simple utility: Incentive design and trade-offs for corporate employee-entrepreneurs, *Entrepreneurship Theory and Practice,* DOI: 10.1111/j.1540-6520.2009.00314.x.

Monsen, E. W., Saxton, T. and Patzelt, H. (2007) Motivation and participation in corporate entrepreneurship: The moderating effects of risk, effort, and reward, *Frontiers of Entrepreneurship Research,* 27(21), Article 1.

Morris, M. H., Kuratko, D. F. and Covin, J. G. (2008) *Corporate Entrepreneurship and Innovation,* Second edition, South-Western, USA.

Morris, M. H., Allen, J., Schindehutte, M., and Avila, R. (2006) Balanced management control systems as a mechanism for achieving corporate entrepreneurship, *Journal of Managerial Issues,* 18(4), 468–493.

Morris, M. H., Davis, D. L. and Allen, J. W. (1994) Fostering corporate entrepreneurship: Cross cultural comparison of the importance of individualism versus collectivism*, Journal of International Business Studies*, 25(1), 65-89.

Mouton, J. (2002) *Understanding social research,* Third edition, Van Schaik Publishers, Pretoria.

Nahapiet, J. and Ghoshal, S. (1998) Social capital, intellectual capital and organizational advantage, *Academy of Management Review,* 23(2), 242–266.

Naveh, E. (2007) Formality and discretion in successful R&D projects. *Journal of Operations Management,* 25(1), 110–125.

Nielson, R. P., Peters, M. P. and Hisrich, R. D. (1985) Entrepreneurship strategy for internal markets—Corporate, nonprofit, and government institution cases, *Strategic Management Journal.* 6(2), 181-189.

Newcombe, M. J. and Ashkanasy, N. M. (2002) The role of affect and affective congruence in perceptions of leaders: an experimental study, *The Leadership Quarterly* 13, 601–614.

Pearce II, J.A., T. Robertson Kramer and D.K. Robbins (1997), Effects of managers' entrepreneurial behavior on subordinates, *Journal of Business Venturing*, 12, 147-160.

Pfeffer, J. and Veiga, J. F. (1999) Putting people first for organizational success, *Academy of Management Executive,* 13(2), 37–48.

Pinchot, G. and Pellman, R. (1999) *Intrapreneuring in action; A Handbook for business innovation,* San Francisco, CA: Berret-Koehler Publishers Inc.

Pinchot, G. (1987) Innovation through intrapreneuring, *Research Management,* 30(2), 14–19.

Pinchot, G. (1985) *Intrapreneuring,* Harper and Row, New York.

Pugh, S. D. (2001) Service with a smile: emotional contagion in the service encounter, *Academy of Management Journal*, 44(5), 1018–1027.

Roth, K. and O'Donnell, S. (1996) Foreign subsidiary compensation strategy: An agency theory perspective, *Academy of Management Journal,* 39(3), 678–703.

Rule, E. G. and Irwin, D. W. (1988) Fostering intrapreneurship: The new competitive edge, *Journal of Business Strategy,* 9(3), 44–47.

Sathe, V. (1985) Managing an entrepreneurial dilemma: nurturing entrepreneurship and control in large corporations, *Frontiers of Entrepreneurship Research* (Wellesley, Mass: Babson College), 636–656.

Sexton, D. L. and Camp, M. (1993) Innovation and entrepreneurship: Modeling individual and organizational factors, *Advances in Global High-Technology Management,* 3, 197–215.

Scheepers, M. J., Bloom, J. Z. and Hough, J. (2008) The development of an instrument to assess the enacted environment for corporate entrepreneurship in South Africa, *Management Dynamics : Journal of the Southern African Institute for Management Scientists,* 17(4), 2-17.

Shane, S., Locke, E. A. and Collins, C. J. (2003) Entrepreneurial motivation, *Human Resource Management Review* 13, 257–279.

Shane, S. and Venkataraman, S. (2000) The promise of entrepreneurship as a field of research, *Academy of Management Review,* 25(1), 217–226.

Sharma, P. and Chrisman, J. (1999) Toward a reconciliation of the definitional issues in the field of corporate entrepreneurship, *Entrepreneurship Theory and Practice*, 31(3), 11-27.

Shaver, K. G., Gartner, W. B., Crosby, E., Bakalarova, K. and Gatewood, E. J. (2001) Attributions about entrepreneurship: A framework and process for analyzing reasons for starting a business, *Entrepreneurship Theory and Practice,* 26(2), 5–32.

StatSoft, Inc. (2011) *Electronic Statistics Textbook*, Tulsa, Ohklahoma: StatSoft. WEB: http://www.statsoft.com/textbook/.

Sun, L., Aryee, S. and Law, K. S. (2007) High-performance human resources practices, citizenship behavior, and organizational performance: A relational perspective, *Academy of Management Journal,* 50(3), 558-577.

Tishler, A., Dvir, D., Shenhar, A. and Lipovetsky, S. (1996) Identifying critical success factors of defense development projects: A multivariate analysis, *Technological Forecasting and Social Change,* 51(2), 151–171.

Treiman, D. J. (2009) *Quantitative data analysis: Doing research to test ideas,* First edition, Jossey-Bass, San Francisco.

Turban, D. B. and Keon, T. L. (1993) Organizational attractiveness: An interactionist perspective, *Journal of Applied Psychology*, 78, 184–193.

Utsch, A., Rauch, A., Rothfufs, R. and Frese, M. (1997) Who becomes a small scale entrepreneur in a post-socialist environment: On the differences between entrepreneurs and managers in East Germany, *Journal of Small Business Management*, 37(3), 31-43.

Weiss, D. and Maher, M. W. (2009) Operational hedging against adverse circumstances, *Journal of Operations Management*, 27(5), 362–373.

Wong, K. Y. (2005) Critical success factors for implementing knowledge management in small and medium enterprises, *Industrial Management and Data Systems*, 105(3), 261-79.

www.surveymonkey.com

Yanadori, Y. and Marler, J. (2006) Compensation strategy: Does business strategy influence compensation in high-technology firms? *Strategic Management Journal,* 27(6), 559–570.

Zahra, S. A. (1991) Predictors and financial outcomes of corporate entrepreneurship: An explorative study, *Journal of Business Venturing,* 6(4), 259–285.

Zajac, E. J., Golden, B. R. and Shortell, S. M. (1991) New organizational forms of enhancing innovation: The case of internal corporate joint ventures, *Management Science,* 37(2), 170–185.

Zenger, T. R. and Lazzarini, S. G. (2004) Compensating for innovation: Do small firms offer high-powered incentives that lure talent and motivate effort?, *Managerial and Decision Economics,* 25, 329-345.

Zenger, T. R. and Marshall, C. R. (2000) Determinants of incentive intensity in group-based rewards, *Academy of Management Journal,* 43(2), 149–163.

Zenger, T. R. (1994) Understanding organizational diseconomies of scale in R&D: agency problems and the allocation of engineering talent, ideas and effort by firm size, *Management Science,* 40(6), 708–729.

Zwikael, O. and Sadeh, A. (2007) Planning effort as an effective risk management tool, *Journal of Operations Management*, 25(4), 755–767.

APPENDIX 1

Research questionnaire

Section A – Demographic information

Please place a cross (x) in the appropriate box to indicate your response

1. Gender

Male	Female

2. Age

25 years or younger	26 - 40 years	41 - 55 years	56 years or older

3. Current job position

Manager	Director	Executive	Other (please specify) _____

4. Highest educational qualification

Matric qualification and below	Certificate or diploma	Undergraduate degree	Postgraduate degree

5. Years spent in current job

5 years or shorter	6 - 10 years	11 - 15 years	16 years or longer

6. Years working in the company

5 years or shorter	6 - 10 years	11 - 15 years	16 years or longer

7. Number of times you have changed employer

None	Once	Twice	Thrice and above

8. Which industry is your company operating in?

Manufacturing	Information technology	Telecommunications	Other (please specify) _____

9. Number of employees in your company

50 or fewer	51 to 100	101 to 150	151 or more

Section B - Actual Compensation Practices

How often are the following compensation practices used to promote intrapreneurial behaviour in your company?

1.	Variable bonuses based on ROI of new venture formed from the intrapreneur's idea	Very often	Often	Sometimes	Hardly ever	Never
2.	Fixed bonuses for milestone achievement	Very often	Often	Sometimes	Hardly ever	Never
3.	Options in parent company equity	Very often	Often	Sometimes	Hardly ever	Never
4.	Equity in parent company	Very often	Often	Sometimes	Hardly ever	Never
5.	Higher than normal salary	Very often	Often	Sometimes	Hardly ever	Never
6.	Equity in new venture formed from the intrapreneur's idea	Very often	Often	Sometimes	Hardly ever	Never
7.	Options in new venture equity	Very often	Often	Sometimes	Hardly ever	Never
8.	Variable bonuses for milestone achievement	Very often	Often	Sometimes	Hardly ever	Never
9.	Accelerated promotion	Very often	Often	Sometimes	Hardly ever	Never
10.	Motivation-based compensation	Very often	Often	Sometimes	Hardly ever	Never
11.	Job security	Very often	Often	Sometimes	Hardly ever	Never
12.	Flexible work hours	Very often	Often	Sometimes	Hardly ever	Never
13.	Opportunity for growth	Very often	Often	Sometimes	Hardly ever	Never
14.	Job enrichment	Very often	Often	Sometimes	Hardly ever	Never
15.	Praise and recognition	Very often	Often	Sometimes	Hardly ever	Never
16.	Dinner at a prestigious restaurant	Very often	Often	Sometimes	Hardly ever	Never
17.	Weekend at a hotel in South Africa or abroad	Very often	Often	Sometimes	Hardly ever	Never

Section C - Desired Compensation Practices

Please indicate to what extent you agree or disagree that the following practices of compensation should be used in order to promote intrapreneurial behaviour within your company.

1.	Variable bonuses based on ROI of new venture formed from the intrapreneur's idea	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
2.	Fixed bonuses for milestone achievement	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
3.	Options in parent company equity	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
4.	Equity in parent company	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
5.	Higher than normal salary	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
6.	Equity in new venture formed from the intrapreneur's idea	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
7.	Options in new venture equity	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
8.	Variable bonuses for milestone achievement	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
9.	Accelerated promotion	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
10.	Motivation-based compensation	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
11.	Job security	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
12.	Flexible work hours	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
13.	Opportunity for growth	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
14.	Job enrichment	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
15.	Praise and recognition	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
16.	Dinner at a prestigious restaurant	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
17.	Weekend at a hotel in South Africa or abroad	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly

Section D: Current Intrapreneurial Behaviour

To what extent would you agree or disagree with the following statements about your current intrapreneurial behaviour?

1. I get proposed actions through bureaucratic red tape and into practice efficiently	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
2. I display an enthusiasm for acquiring skills	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
3. I quickly change course of action when results aren't being achieved	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
4. I take the initiative for my own ideas	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
5. I think about my work in new and stimulating ways	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
6. I find ways to improve our products and services	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
7. I show support for the good ideas of others	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
8. I boldly move ahead with a promising new approach when others might be more cautious	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
9. If large interests are at stake, I regularly go for the big win even when things could seriously go wrong	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
10. I get people to rally together to meet a challenge	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
11. I often take risks in my job	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
12. I first act and then ask for approval, even when I know that will annoy other people	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
13. I willingly expose myself to situations with uncertain outcomes	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
14. I am unconcerned with danger	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
15. I devote a great deal of effort to selling my ideas	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
16. I use opportunities quickly in order to attain my goals	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
17. I search for a solution immediately whenever something goes wrong	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
18. I actively attack pressing organizational problems	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly

Section E - Elevated Intrapreneurial Behaviour

To what extent would you agree or disagree with the following statements about your intrapreneurial behaviour <u>if the desired compensation practices were implemented by your company</u>?

1. I would get proposed actions through bureaucratic red tape and into practice efficiently	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
2. I would display an enthusiasm for acquiring skills	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
3. I would quickly change course of action when results aren't being achieved	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
4. I would take the initiative for my own ideas	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
5. I would think about my work in new and stimulating ways	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
6. I would find ways to improve our products and services	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
7. I would show support for the good ideas of others	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
8. I would boldly move ahead with a promising new approach when others might be more cautious	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
9. If large interests are at stake, I would regularly go for the big win even when things could seriously go wrong	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
10. I would get people to rally together to meet a challenge	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
11. I would often take risks in my job	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
12. I would first act and then ask for approval, even when I know that will annoy other people	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
13. I would willingly expose myself to situations with uncertain outcomes	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
14. I would be unconcerned with danger	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
15. I would devote a great deal of effort to selling my ideas	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
16. I would use opportunities quickly in order to attain my goals	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
17. I would search for a solution immediately whenever something goes wrong	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
18. I would actively attack pressing organizational problems	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly

Section F - Department's Risk Control

To what extent would you agree or disagree with the following statements about the risk control orientation of your department?

1. In general, my department have a strong proclivity for low risk projects (with normal and certain rates of return)	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
2. In general, my department foster and encourage a lesser level of business, financial and personal risk-taking	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
3. In general, my department always research and assess risk factors in order to minimize uncertainty	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
4. In general, my department prefer to apply techniques and processes that have worked in other domains	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
5. In general, my department carefully manage risks and avoid taking actions without sufficient forethought, research and planning	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
6. In general, my department prefer to use no borrowing or little borrowing when investing in major projects	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
7. In general, my department believe that owing to the nature of the environment, it is best to explore it gradually via cautious, incremental behaviour	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
8. When confronted with decision making situations involving uncertainty, my department typically adopts a cautious "wait and see" posture in order to minimize the probability of making costly decisions	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly
9. In general, my department favour a strong emphasis on the marketing of tried and true products and services	Disagree strongly	Disagree somewhat	Undecided	Agree somewhat	Agree strongly

APPENDIX 2

Chi-Square Tests with Successive Roots Removed (Hypothesis 1)

Root removed	Canonical - R	Canonical - R-sqr.	Chi-sqr.	df	p	Lambda - Prime
0	0.576251	0.332065	406.4517	306	0.000112	0.112453
1	0.551799	0.304482	331.3886	272	0.108249	0.168359
2	0.538441	0.289918	263.8522	240	0.140018	0.242062
3	0.446713	0.199553	200.1704	210	0.674883	0.340894
4	0.398699	0.158961	158.7697	182	0.891639	0.425879
5	0.373367	0.139403	126.5699	156	0.959274	0.506372
6	0.351965	0.123880	98.6460	132	0.986487	0.588396
7	0.307337	0.094456	74.0472	110	0.996573	0.671593
8	0.282745	0.079945	55.5924	90	0.998345	0.741646
9	0.235361	0.055395	40.0945	72	0.999157	0.806088
10	0.209899	0.044058	29.4947	56	0.998642	0.853360
11	0.183224	0.033571	21.1139	42	0.997027	0.892690
12	0.170745	0.029154	14.7624	30	0.990999	0.923700
13	0.153729	0.023633	9.2592	20	0.979689	0.951438
14	0.127633	0.016290	4.8108	12	0.963991	0.974467
15	0.095751	0.009168	1.7558	6	0.940726	0.990605
16	0.015145	0.000229	0.0427	2	0.978891	0.999771

APPENDIX 3

Chi-Square Tests with Successive Roots Removed (Hypothesis 1)

Root removed	Canonical - R	Canonical - R-sqr.	Chi-sqr.	df	p	Lambda - Prime
0	0.576251	0.332065	406.4517	306	0.000112	0.112453
1	0.551799	0.304482	331.3886	272	0.108249	0.168359
2	0.538441	0.289918	263.8522	240	0.140018	0.242062
3	0.446713	0.199553	200.1704	210	0.674883	0.340894
4	0.398699	0.158961	158.7697	182	0.891639	0.425879
5	0.373367	0.139403	126.5699	156	0.959274	0.506372
6	0.351965	0.123880	98.6460	132	0.986487	0.588396
7	0.307337	0.094456	74.0472	110	0.996573	0.671593
8	0.282745	0.079945	55.5924	90	0.998345	0.741646
9	0.235361	0.055395	40.0945	72	0.999157	0.806088
10	0.209899	0.044058	29.4947	56	0.998642	0.853360
11	0.183224	0.033571	21.1139	42	0.997027	0.892690
12	0.170745	0.029154	14.7624	30	0.990999	0.923700
13	0.153729	0.023633	9.2592	20	0.979689	0.951438
14	0.127633	0.016290	4.8108	12	0.963991	0.974467
15	0.095751	0.009168	1.7558	6	0.940726	0.990605
16	0.015145	0.000229	0.0427	2	0.978891	0.999771