

https://dspace.org/

Organisational factors fostering corporate entrepreneurship: a study of state owned entities in South Africa and Zimbabwe

Musara, Diana Marcellin

2016
https://hdl.handle.net/10539/23839

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

ORGANISATIONAL FACTORS FOSTERING CORPORATE ENTREPRENEURSHIP: A STUDY OF STATE OWNED ENTITIES IN SOUTH AFRICA AND ZIMBABWE.

Diana Musara

Student number: 1260749

Supervisor: Dr Robert Venter

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 of Master of Management specialising in Entrepreneurship and New Venture Creation

Wits Business School

16th March 2016

ABSTRACT

The purpose of this research is to investigate how organisational factors such as management support, reward/reinforcement and work discretion fosters corporate entrepreneurship at State Owned Entities (SOE) in South Africa and Zimbabwe. Several studies have been conducted on corporate entrepreneurship in the private sector with limited research on the same factors in the public sector, especially in Africa.

The Corporate Entrepreneurship Assessment Instrument (CEAI) was used in measuring managers' perception on management support, reward and reinforcement and work discretion. Four hundred on-line questionnaires were distributed, with a response rate of 169 managers from South African and Zimbabwean state owned entities. An hierarchical multiple regression model was used to analyse the results, which showed that there was a positive and significant relationship between management support, reward/reinforcement and work discretion with innovation, confirming results from previous studies. Occupational level was found to moderate the relationship between management support and innovation and the relationship was found to be strongest at junior management level. No moderation effect was found when reward/reinforcement and work discretion was tested with innovation.

Further evidence from the survey results also indicated that Zimbabwean SOEs had higher levels of reward /reinforcement and work discretion than South Africa, but both countries had the same level for management support and innovation. However Zimbabwe had implemented more projects than South Africa, indicating that its SOEs were more entrepreneurial. Finally, when occupational levels were considered, Zimbabwe had higher scores for all the three independent variables, except for innovation, which South Africa was leading at junior management levels. However, the levels at middle and senior management was the same for both countries.

DECLARATION

I, Diana Musara, 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 of Master of Management in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other university.

_____

Diana Musara

Signed at ……

On the 16th day of March, 2016

ACKNOWLEDGEMENTS

I am grateful to my supervisor, Dr Robert Venter, for his guidance throughout the research process.

To my husband, Washington and my two sons, Kudzai and Tendai, for their understanding, encouragement and support during the course of my studies.

TABLE OF CONTENTS

ABSTRACT ..... **I**

DECLARATION ..... **II**

ACKNOWLEDGEMENTS ..... **III**

LIST OF FIGURES ..... **VIII**

LIST OF TABLES ..... **IX**

1 CHAPTER : INTRODUCTION **1**

1.1 PURPOSE OF THE STUDY 1
1.2 CONTEXT OF THE STUDY 3
1.3 PROBLEM STATEMENT 6
1.3.1 MAIN PROBLEM 6
1.3.2 SUB-PROBLEMS 7
1.4 SIGNIFICANCE OF THE STUDY 8
1.5 DELIMITATIONS OF THE STUDY 9
1.6 DEFINITION OF TERMS 10
1.7 ASSUMPTIONS 12
1.8 OUTLINE OF RESEARCH REPORT 13
1.9 CONCLUSION 13

2 CHAPTER: LITERATURE REVIEW **14**

2.1 INTRODUCTION 14
2.2 THEORETICAL BACKGROUND TO THE STUDY 14
2.2.1 ENTREPRENEURSHIP 15
2.2.2 CORPORATE ENTREPRENEURSHIP 16
2.2.3 SUSTAINING CORPORATE ENTREPRENEURSHIP 19
2.2.4 PUBLIC SECTOR/ STATE OWNED ENTITIES 21
2.2.5 ENTREPRENEURSHIP AND CORPORATE ENTREPRENEURSHIP IN THE PUBLIC SECTOR 25
2.2.6 INNOVATION 32
2.2.7 HUMAN CAPITAL 47
2.2.8 CORPORATE ENTREPRENEURSHIP PROCESS RELATED TO MANAGERS 48
2.3 TOWARDS A HYPOTHESISED MODEL OF CE IN SOES 54

2.3.1 HYPOTHESES 55
2.3.2 MANAGEMENT SUPPORT AND ENTREPRENEURIAL ACTION 56
2.3.3 REWARD /REINFORCEMENT AND INNOVATION 59
2.3.4 IMPACT OF WORK DISCRETION ON INNOVATION 62
2.3.5 LEVEL OF INNOVATION AS A RESULT OF FOSTERING OF INTERNAL ORGANISATIONAL ANTECEDENTS IN BOTH ZIMBABWE AND SOUTH AFRICAN STATE OWNED ENTITIES AS PERCEIVED BY MANAGERS IN THESE ORGANISATIONS 64
2.4 CONCLUSION 65
3 CHAPTER: RESEARCH METHODOLOGY 66
3.1 INTRODUCTION 67
3.2 RESEARCH APPROACH 67
3.3 RESEARCH DESIGN 68
3.4 POPULATION AND SAMPLING 68
3.4.1 POPULATION 68
3.4.2 DEMOGRAPHICS OF THE COMPANIES 69
3.5 SAMPLE AND SAMPLING METHOD 78
3.6 RESEARCH INSTRUMENT 79
3.7 PROCEDURE FOR DATA COLLECTION 80
3.8 PROCEDURE FOR DATA ANALYSIS AND INTERPRETATION 80
3.9 LIMITATIONS OF THE RESEARCH 82
3.10 VALIDITY AND RELIABILITY OF RESEARCH DESIGN 82
3.10.1 EXTERNAL VALIDITY 83
3.10.2 INTERNAL VALIDITY 83
3.10.3 RELIABILITY 83
3.10.4 PILOT STUDY RELIABILITY AND VALIDITY TESTING 84
3.11 ETHICAL CONSIDERATIONS 87
3.12 CONCLUSION 88
4 CHAPTER: PRESENTATION AND DISCUSSION OF THE RESULTS 89
4.1 INTRODUCTION 89
4.2 DEMOGRAPHIC PROFILE OF RESPONDENTS 89
4.3 SAMPLE DEMOGRAPHICS 90
4.4 MEASUREMENT SCALE 92
4.5 DESCRIPTIVE ANALYSIS AND CORRELATION ANALYSIS 95

4.6 ANALYSIS: MANAGEMENT SUPPORT 96
4.6.1 ANALYSIS: MANAGEMENT SUPPORT AND IMPLEMENTED PROJECTS 99

4.7 ANALYSIS: REWARD AND REINFORCEMENT AND INNOVATION 101
4.7.1 ANALYSIS: REWARD/REINFORCEMENT AND IMPLEMENTED PROJECTS (INNOVATION) 103

4.8 ANALYSIS: WORK DISCRETION AND INNOVATION 105
4.8.1 ANALYSIS: WORK DISCRETION AND IMPLEMENTED PROJECTS (INNOVATION) 107

4.9 DIFFERENT LEVELS OF INTERNAL ANTECEDENTS AND INNOVATION WITHIN SOUTH AFRICAN AND ZIMBABWE STATE OWNED ENTITIES. 109
4.9.1 JUNIOR MANAGEMENT LEVEL ANALYSIS 111
4.9.2 MIDDLE MANAGEMENT ANALYSIS 112
4.9.3 SENIOR MANAGEMENT ANALYSIS 112
4.9.4 NUMBER OF IMPLEMENTED PROJECTS IN SOUTH AFRICA VS ZIMBABWE ANALYSIS 114

4.10 CONCLUSION 116

5 CHAPTER: DISCUSSION OF THE RESULTS 118

5.1 INTRODUCTION 118
5.2 DISCUSSION PERTAINING TO MANAGEMENT SUPPORT AND INNOVATION (HYPOTHESIS 1) 118
5.3 DISCUSSION PERTAINING TO REWARD/REINFORCEMENT 120
5.4 DISCUSSION PERTAINING TO WORK DISCRETION AND INNOVATION 121
5.5 DISCUSSION PERTAINING TO THE COMPARISON OF PERCEIVED INTERNAL ORGANISATIONAL ANTECEDENTS IN BOTH ZIMBABWE AND SOUTH AFRICAN STATE'S OWNED ENTITIES 122
5.5.1 COMPARING SOUTH AFRICA TO ZIMBABWE 123
5.5.2 RESULTS BY SOES 124
5.5.3 RESULTS BY GENDER 125

5.6 CONCLUSION 126

6 CHAPTER : CONCLUSIONS 128

6.1 INTRODUCTION 128
6.2 SUMMARY OF LITERATURE 128
6.3 SUMMARY OF RESULTS 130
6.4 IMPLICATIONS 132
6.5 LIMITATIONS 132
6.6 RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE RESEARCH 133
6.7 CONCLUSION 136

REFERENCES 138

APPENDIX A: CONSENT FORM 156

APPENDIX B: INSTRUMENT 159

APPENDIX C: CONSISTENCY MATRIX 1

APPENDIX D: PROJECT PLAN 5

LIST OF FIGURES

Figure 2.1: Corporate Entrepreneurship. Source: Guth and Ginsburg (1990) 18

Figure 2.2: Proposed Model of Perceived Implementation / Outcome Comparisons at the organisational and Individual Levels (Kuratko, Hornsby & Goldsby, 2004, p12) 20

Figure 2.3: Public Sector Corporate Entrepreneurship Model (Kearney, Hisrich & Roche 2007) 32

Figure 2.4: Rankings on Ease of Doing Business - Zimbabwe (Source: Ease of Doing Business, World Bank, 2016) 43

Figure 2.5: Restructuring of Public Enterprises (Source: Presidential Working Committee, 2012). 45

Figure 2.6: Rankings on Ease of Doing Business topic - South Africa (Source: Ease of Doing Business, World Bank, 2016) 46

Figure 2.7: Model of the Corporate Entrepreneurship Process as it relates to Managers (Source: Kuratko, et al., 2004) 49

Figure 2.8: Hypothesis Model: Source: Research Proposal 55

Figure 2.9: The Expectancy Model (Source: Porter & Lawler, 1968 in Kurtatko, Morris, & Covin, 2008). 60

Figure 4.1: Moderation Effect of Occupational Level on the Relationship between MS and Innovation 98

Figure 4.2: Distribution of Projects 115

Figure 5.1: Innovation comparison between Zimbabwe and South Africa (Source: Research results by country comparison, 2015) 124

Figure 5.2: Managerial CE Perception for Organisation Antecedents (Source: Survey results, 2015)..... 125

Figure 5.3: Gender Comparison (Source: Research findings (2015))..... 126

LIST OF TABLES

Table 3.1: Profile of Responses :SHRA..... 70

Table 3.2: Profile of Responses:IDC..... 71

Table 3.3: Profile of Responses:NSSA..... 73

Table 3.4: Profile of Responses:ZETDC..... 75

Table 3.5: Profile of Responses:EAAB..... 76

Table 3.6: Profile of Responses:NETONE..... 77

Table 3.7: Reliability and Validity Test for the Constructs for Pilot study . 84

Table 3.8: Removed Variables..... 86

Table 4.1: Demographic profile of respondents..... 89

Table 4.2: Sample Demographics..... 91

Table 4.3: Measurement Scale..... 92

Table 4.4: Descriptive Analysis and Correlation Analysis..... 95

Table 4.5: Moderation Regression for Management Support and Innovation..... 97

Table 4.6: Moderation Regression for Management Support and Projects..... 99

Table 4.7: Moderation Regressions for Reward / Reinforcement and Innovation..... 102

Table 4.8: Moderation Regressions for Reward/Reinforcement and Implemented Projects 104

Table 4.9: Moderation Regressions for Work Discretion and Innovation 106

Table 4.10: Moderation Regressions for Work Discretion and Number of Implemented Projects 108

Table 4.11: Independent samples t-test between South Africa and Zimbabwe - Overall 110

Table 4.12: Independent samples t-test between South Africa and Zimbabwe - junior management 111

Table 4.13: Independent samples t-test between South Africa and Zimbabwe - Middle management 112

Table 4.14: Independent samples t-test between South Africa and Zimbabwe – Top/ Senior Management 113

Table 4.15: No of Projects implemented in South Africa versus Zimbabwe 114

Table 4.16: Equality of Variances 114

Table 4.17: Summary of hypothesis results 116

1 CHAPTER: INTRODUCTION

1.1 Purpose of the study

The purpose of the study is to assess the level at which corporate entrepreneurship is practised in State Owned entities (SOE) with specific reference to human capital which is an antecedent of corporate entrepreneurship. Key to the study is the confirmation of the perception that internal organisational factors encourage mainly managers to engage in corporate entrepreneurship (CE) activities. Due to the changes that are occurring in the external environment that are bringing challenges that threaten the continual existence of companies, there is a requirement for organisations to transform their internal processes. Companies that will adopt corporate entrepreneurship practices will be able to adapt, be creative, forceful, flexible and competitive and will be able to react with speed, thereby achieving a sustainable competitive edge.

Ireland, Kuratko and Morris (2006) supported this notion by stressing that the promotion of CE assists organisations with the regeneration of a competitive advantage through product and process innovations, development of new markets and stimulating strategic renewal. Stevenson and Jarillo-Mossi (1986) defined entrepreneurship as a value creation process that combines resources to exploit an opportunity. In this regard, corporate entrepreneurship is a process whereby a new organisation is created or organisational renewal is instigated or innovation within an organisation occurs, championed by an individual or a group of individuals in collaboration with an established organisation (Glaser, Sebastian, Fourne & Elfring, 2015).

According to the Business Day (Dec 4, 2014), SOEs in South Africa have been struggling to deliver on social services and on return on investments, due to widespread governance and mismanagement issues. McGregor (2014) cited the issue of corruption, bureaucratic strangulation and lack of capacity as impacting on the performance of SOEs which, of late, have had to rely on government to continuously rescue them financially. She further

highlighted that Eskom's profit has been falling with it ending at R12.6 billion in September 2014 and R3.6 billion in August 2015, South African Airways requesting a bail out of R5 billion as reported by Times Live (Nov, 18th, 2015) and the Public Pension Fund having its CEO, John Oliphant suspended in October 2015 for signing unauthorised contracts and with its Board consisting of political appointments, according to McGregor (2014). In Zimbabwe, State Owned Entities are facing similar challenges with enterprises like Air Zimbabwe being reported to be bankrupt and requiring $ 600 million bail out to cover its historic debt and capitalisation for its turnaround strategy, according to the Chronical newspaper (March 17, 2015) and the Zimbabwe Broadcasting Corporation, which saw its entire Board dissolved in 2014, due to alleged corruption (Chigudu, 2015).

In seeking answers and solutions to these problems this research has turned to corporate entrepreneurship and the level it is practiced in Public / State Owned Entities and the way it could influence the performance of such organisations. The research focuses mainly on South African and Zimbabwean public entities as the performance of these entities are critical as they contributes 40% of GDP of their respective countries. By providing a comparison of an emerging market and a struggling economy in Africa, the research sought to obtain insight into whether the level of CE is influenced by the economic outlook of a country. It also sought to investigate if organisational antecedents had an impact on innovation. Thus it was critical to assess and determine the level that corporate entrepreneurship, if any, is practiced by managers in state owned entities and how it has contributed to innovation thereby impacting on the entities' performance. This relationship is further elaborated under context.

The study focuses on the processes in SOEs that lead to innovative activities, such as process and product reengineering, new technology and administrative techniques and improved strategies (Kearney, Hisrich & Frank, 2008). The role that management, reward/reinforcement and work discretion play in influencing innovation form the basis for this study. Innovation is measured by the Corporate Entrepreneurship Assessment Instrument (CEAI) which is aimed at confirming the perception that the organisations under study are involved in technology, organisation and human innovation and on the number of projects /

new ideas implemented. The study sought to confirm whether SOEs are engendering entrepreneurship through the fostering of an environment conducive to exploration, building trust and motivating staff to be entrepreneurial and innovative (Kearney, Hisrich & Roche, 2008).

This section covers the context of the study, the research problem statement with all its sub problems. This is followed by an overview of the purpose of the study, research questions, with all the related theoretical definitions and the contribution the study makes.

1.2 Context of the study

The study is based on corporate entrepreneurship in the public sector in general and with specific reference to State Owned Entities. As such, it is important that we understand how SOEs operate in general, and then focus on SOEs in Zimbabwe and South Africa and the challenges that they have been facing which requires them to implement corporate entrepreneurship for their sustainability. An understanding of these challenges, together with the insight from the study based on the feedback that is received from managers' perception on how organisational antecedents are configured, feeds into recommendations and any further research.

The focus is on understanding the impact of entrepreneurship, with specific focus on corporate entrepreneurship, especially innovation, and how it is influenced by how internal organisational factors are configured in state owned entities in Zimbabwe and South Africa. Ramamurti (1986, p. 23) defined an SOE as a "legal autonomous entity that operates along commercial lines but is owned or partly owned by government" Kurtatko, Morris, and Covin (2008) summarised the profile of Public Sector Entities/ State Owned entities as being characterised by the need to deliver social and political objectives with an underlying need for profit making. They have less exposure to markets, therefore are less driven to reduce costs, manage operating economies or allocate resources efficiently but equity and political consideration are the main drivers.

Taking into consideration the challenges by SOEs which is further

elaborated in Chapter 2, this study focuses on corporate entrepreneurship as a means to transform SOEs and improve their financial performance. Corporate Entrepreneurship of late has been gaining relevance with executives and researchers citing it as an effective means for revitalising companies, thereby improving their financial performance (Zahra & Covin,1995). Kearney, Hisrich and Roche (2008) further stated that corporate entrepreneurship does not only benefit organisations but economies through increased productivity, best practices, creation of new industries and improvement of international competitiveness. This research focuses on the role that innovation plays in SOEs and the challenges managers face in implementing innovation to enable them to deliver new services and improve efficiencies.

Rainey (2009) highlighted that managers in public organisations have less flexibility, with organisational sociologists agreeing and noting that these bureaucracies are set up to conduct their business in a stable, structured and consistent manner that does not allow for change or disruptions. Borins (2002) supported this notion, arguing that public organisations' strong central controls and hostile operating environment create personnel systems that do not reward staff for successful innovation but punish them for failed innovation attempts.

Other studies were done by Hornsby, Kuratko, Shepard and Bott (2009) who focused on the relationship between different levels of management and the number of entrepreneurial ideas implemented in organisations. Managers' perceptions on internal organisational factors were measured using the Corporate Entrepreneurship Assessment Instrument (CEAI). The results confirmed that management support, work discretion, organisational boundaries, reward / reinforcement and time availability existed in the organisation. They also found out that there was a significant relationship between management support and entrepreneurial action, with it being more positive for senior and middle managers than junior managers. Tseng et al (2008) focused on the configuration of innovation and performance in the service industry. The results indicated that technological skills, organisational processes and human capital enhanced firm innovativeness. Thus, CE can be viewed from different perspectives with some principles being applicable to both

private and public sectors. This research explores all these perspectives in relation to the public sector.

Although there have been a number of studies conducted in the private sector on corporate entrepreneurship, the public sector has not received similar attention, especially SOEs in Africa. Research on government organisation at local and organisational level was done by Teske and Scheider (1994). Borins (2001; 2002) focused on innovation in the public sector. Kurtatko, Morris and Covin (2008) in their book, *Corporate Innovation and Entrepreneurship* extensively covered research that has been done on entrepreneurship, corporate entrepreneurship and how this has been applied in different sectors including public entities.

Other studies have been conducted on entrepreneurship in the public sector in Pakistan, on performance of public higher education by Nayyar and Mahmood (2014). The study investigated the impact of CE determinants, like structure, management, culture and environment, on organisational performance. The findings confirmed a positive and significant relationship between culture, environment and management and performance. However, there was no significant relationship between structure and performance. Chavhunduka, Fauzi, Sifile, Muranda, Mabvure & Dandira (2014) conducted a study on antecedents for effective management of public enterprise restructuring in Zimbabwe. The study sought to confirm whether organisational culture could be used as leverage for performance in Zimbabwean SOEs. Results of the study showed that organisational culture was critical in the improvement of performance.

Linyiru, Karanja and Gichira (2015) conducted a study on the influence of corporate entrepreneurship on performance of state owned corporations in Kenya. They sought to establish the effect of pro-activeness on SOEs' performance and evaluation of innovativeness on performance. Results showed that companies that initiated action which competitors responded to, took the lead ahead of their competitors in introducing new products or novel ideas. The study concluded that intensive application of CE increased efficiency and

reduced costs and prices, thereby efficiently responding to moves by competitors and market changes.

1.3 Problem statement

1.3.1 Main problem

State owned entities, especially in Africa, are known for poor service delivery. They have been accused of inability to be innovative, delegating ineffectively, concerned with regulations and politics and for being corrupt (CPSI, 2007). The barriers to innovate, which is an antecedent of corporate entrepreneurship within the public sector according to Borins (2001, p 18), has been due to “hostile and sceptical attitudes, turf fights, difficulty coordinating organisations, logistical problems, difficulty implementing new technology, union opposition, middle management opposition and public sector opposition to entrepreneurial action”. He added that the political environment also posed further problems centred on inadequate funding, legislative or regulatory constraints as well as political opposition.

Having said that, public sector organisations are faced with challenges of budget cuts, high cost of service, which then require them to be self-sufficient and to cut down on inefficiencies, resulting in them being required to be entrepreneurial to stay afloat. As a result, innovation within the public sector is seen as key and necessary as it will help with the reduction of frustrations faced when dealing with government, reduce government spending, thereby ensuring consistent, fair and equal services and managing knowledge (CPSI, 2007). These challenges have given rise to the need for a review of how SOEs in South Africa and Zimbabwe practise corporate entrepreneurship, if at all, and if the configuration of internal organisational antecedents has helped them to be more innovative.

This research focuses on assessing organisational factors fostering corporate entrepreneurship at State Owned Entities in South Africa and Zimbabwe.

The CEAI instrument was used to measure employees' perception of CE with regard to management support, rewards/ reinforcement and work discretion and the innovation outcomes of their organisations. The aim was to confirm whether internal organisational factors truly lead to innovation and whether such innovation varies at different management levels.
Overall the study aimed to show that corporate entrepreneurship is critical for State Owned Entities to achieve sustainable competitive advantage and improved performance.

1.3.2 Sub-problems

- Assess the influence of Management support on innovation in State Owned entities amongst managers.

  Research questions

  - *Does Management support encourage innovation in organisations?*
  - *Is there a relationship between management support and innovation?*
  - *Does the ability to drive change in SOEs differ amongst different level of management?*

- Establish the impact of reward/reinforcement on innovation in State Owned entities amongst managers.

  Research Questions

  - *Is there a relationship between reward/reinforcement with innovation?*
  - *Does reward / reinforcement play a positive role in motivating staff to be innovative?*
  - *Does the number of innovation ideas implemented increase as a result of perceived rewards at different levels of management?*

- Assess the extent to which work discretion encourages organisational innovation in *SOEs*.

Research Questions

- *Is there a relationship between work discretion and innovation?*
- *Does the number of innovative ideas implemented increase with perceived work discretion amongst managers at different levels?*
- *Are staff more likely to be more innovative in an environment where they are given more work discretion in SOEs?*

- Evaluate the levels of innovation resulting from fostering of internal organisational antecedents in both Zimbabwean and South African State owned entities as perceived by managers in these organisations.

  Research question

  - *Is there a difference in levels of innovation or corporate entrepreneurship in South African SOEs compared to Zimbabwean entities?*

1.4 Significance of the study

Studies by Covin and Slevin (2002); Ferreira (2002); Kuratko, Hornsby and Covin (2014) have been conducted on CE in the private sector with minimum focus on the public sector. This study aims to add to the current literature on public sector CE in an African context. Given the problems that a number of SOEs have been experiencing resulting in government bail out to keep them afloat, the implementation of CE can play a role to improve their performance, thereby increasing their self-sustainability and service delivery. According to Morris and Jones (1999), entrepreneurship, which is a process of creating value for citizens by exploiting both public and private resources to exploit social opportunities, plays a positive role in the improvement of organisational performance. Corporate entrepreneurship is critical in the public sector as it gives organisations a competitive edge and eliminates uncertainties with the result that they are able to respond quickly and promptly to changes in the turbulent environments (Zahra & Covin, 1995). According to Osborne and Gaebler (1992), innovation and government reinvention assists

government to continuously innovate and improve on quality without being forced by changes in the external environment. Businesses that engage in corporate entrepreneurship are expected to achieve levels of high growth, profitability and new wealth (Hisrich, 2004) and this can be achieved in the public sector just as much as it is achieved in the private sector.

The study also contributes to literature on the factors that influence manager's inclination to support CE. A review of SOEs in South Africa and Zimbabwe on the impact of CE adds to the literature as there have been few studies done to compare the two countries. Since corporate entrepreneurship is considered as a viable means of promoting and sustaining competitiveness as well as transforming business into opportunities for innovation, according to Groenewald and Jansen van Vuuren (2011), insight into its practices will assist SOEs in improving their performance.

Lastly, the information can be used to inform governments on the key corporate entrepreneurship principles to be used in current state owned entities and future entities for them to perform efficiently and to deliver on their mandate. The findings can be used as input by the Presidential Review Committee of South Africa when they look for solutions to make SOEs more effective. The perception survey conducted and the results can also be utilised by organisations like the Social Housing Regulatory Authority when they embark on their restructuring exercise as the results give them an indication of where the gaps are in their application of CE. In Zimbabwe, the insight from the research findings can be utilised when organisations are going through restructuring. The NSSA, for instance, which has participated in this research can use the information when implementing reward systems and as well as putting systems in place that improve the organisation support to management and work discretion to encourage innovation to create sustainability and improve on performance. It is also hoped that the study will provide valuable information required when setting up SOEs in the African context.

1.5 Delimitations of the study

The main purpose for this research is to assess key internal organisational

factors that engender corporate entrepreneurship, especially innovation, in State Owned Entities in South Africa and Zimbabwe. The research aims to gain a deeper understanding of how managerial support, decision making, structure, work discretion, time availability, work boundaries and risk taking affect the organisation's capability to engage in CE activities. The impact of the external environment elements like politics, complexity and change in CE were examined. For the purpose of this study, managerial support, reward and work discretion and how different levels of management are perceived to influence the organisations to be innovative were explored. A comparison of levels of CE of South Africa and Zimbabwe were conducted to establish any learning between the two countries considering the differences in their economic outlook.

1.6 Definition of terms

The definitions below cover most common terms that were used in this paper:

Corporate Entrepreneurship - is defined as a process by which individuals within organisations create opportunities separate from resources they currently own (Stevenson & Jarillo, 1990), doing something new and not following the same way of pursuing opportunities (Vesper, 1990); an atmosphere of entrepreneurship within organisations (Hisrich & Peters, 2007). According to Sharma and Chrisman (1999), it can be considered as the stimulation of renewal and innovation within an organisation or building of new organisations by an organisation.

Corporate venturing - is corporate entrepreneurial efforts which result in the formation of new business organisations within an organisation which may lead to innovation that exploits new markets or new product offerings or both. The venturing process may lead or may not lead to the formation of units that may be distinct in a structural sense (Sharma & Chrisman, 1999).

Entrepreneurship – is defined as "the process of creating value by bringing together unique combination of resources to exploit an opportunity" (Kuratko, Morris & Covin, 2008, p. 9).

Innovation - can be viewed from many different lenses including as concepts or activities that represent a departure from what is currently available or the

extent that companies are doing things that are novel, unique or different (Kuratko, Morris & Covin, 2008). They also stated that it can be when it is a change that addresses a need or a dramatic improvement over conventional solutions or an improvement or introduction of service.

Innovation Configuration – includes technological, organisational and human capital innovation, with innovation capability being driven by organisational and procedural capabilities that influence the innovation process (Tseng, Kuo, & Chou, 2008).

Internal Venturing - is the setting up of a separate entity within an organisation in an attempt to enter different markets through the development of new products from those of the existing entity (Roberts & Berry 1985).

Intrapreneurship- is the development within an organisation of internal markets and small units aimed at creating internal test markets or innovative staff services, technologies or methods (Nielson, Peters & Hisrich, 1985).

Human Capital Innovation - "is the capability to employ optimal solutions from employees' knowledge and skills" (Tseng, et al., 2008, p. 19).

Human Capital - is the resources that an individual has that allow him/her to operate in an autonomous way, whilst involved in the democratisation of work (Gratton & Ghoshal, 2003). Human capital therefore includes formal education, experience, on the job learning and informal training (Davidsson & Honig, 2003).

New Business Venturing - takes place when new corporate resources are formed, when individuals and small teams form entrepreneurial groups within the organisation, tasked with influencing others to change their behaviour (Stopford & Baden-Fuller, 1994).

Organisational Innovation - is associated with the effectiveness and efficiency of how managers create and manage their knowledge in a highly competitive environment.

The Public Sector is made up of all governments and all publicly controlled agencies, enterprises and other entities that are funded by the government which are entrusted with the delivery of public programs, goods and services.

State Owned Entities is defined as a form of government business whose main purpose is to achieve economic growth and operational efficiency to deliver social objectives and be accountable to the public (Yeung, 2005),

Strategic renewal - internal organisational changes that result in the organisation significantly changing its business or corporate level strategy or structure, resulting in the alteration of pre-existing relationships within the organisation and with its external environment (Sharma & Chrisman, 1999).

Technological Innovation - refers to improvements in communication and computers (Tseng, et al., 2008).

Venturing - is defined as the development of new business activities within an organisation (Honsby, et al., 1993), or by expanding operations into existing or new markets (Zahra, 1991).

1.7 Assumptions

Several assumptions were made which had an influence on the outcome of this research:

It was assumed that since the survey was more of a perception questionnaire and respondents were going to remain anonymous, the response rate was going to be high. This proved to be the opposite as a high percentage did not participate, especially in Zimbabwean SOEs, as they were going through restructuring and they feared that the information could be used to victimise them.

Second, there was an expectation that since the survey was electronic more responses would be received from this channel. In a place like Zimbabwe the effect of load shedding, with interruption to internet service proved to be a challenge. Thus, the researcher had to resort to a paper manual survey which yielded a higher response, even in South Africa, as one could easily track the respondents.

Due to the economic outlook of Zimbabwe, an assumption was made that South Africa has more financial resources to support innovation resulting in higher CE practices in South African entities than Zimbabwean entities. However, results proved the opposite as it appears managers in Zimbabwe had to be more innovative to remain in existence and keep the organisations afloat.

1.8 Outline of Research Report

The report in Chapter 2 focuses on the literature based on past studies on entrepreneurship, corporate entrepreneurship and innovation and their application in the private sector and specifically, in the public sector (SOEs). Based on the literature review, the hypotheses of this study are highlighted. In Chapter 3, focus is on research methods, which includes the population and sampling methods used, the measurement instrument and its reliability and validity as well as the data analysis and interpretation procedures. Chapter 4 then looks at the results obtained from the study, which is followed by chapter 5, where a detailed discussion of results is given. Chapter 6 summarises the findings of the study.

1.9 Conclusion

This section mainly focused on introducing the purpose of the research. There has been limited research on how CE is practised in SOEs, especially in Africa, and understanding of the role played by managers. Using the CEAI, this research aims to add to the current literature in the hope that the information gathered will be useful when setting up SOEs. The context of the study and the problem statement was clearly highlighted. The next chapter deals with the literature review, with attention being given to the main concepts and highlighting the key elements of this research.

2 CHAPTER: LITERATURE REVIEW

2.1 Introduction

According to Kuratko, Morris and Covin (2008), the world is currently going through a global entrepreneurial revolution with entrepreneurs in every corner of the world challenging existing assumptions and creating value in novel ways. New products and services are being introduced in the market at record levels, with technology development leading the way for this revolution, resulting in the formation of new businesses and business relationships daily. Companies of today cannot stay static but have to continuously adjust, adapt and redefine themselves at an accelerated rate. They also noted that conventional ways of doing business no longer apply with assumptions about employees, products, resources, technologies and markets having changed and turbulence in the external environment becoming a way of life. Thus, entrepreneurship represents a unifying framework for successful management practices.

Based on the above concepts, this literature review is approached from three different perspectives. The theoretical background of what entrepreneurship is and how the process is implemented in both the private and public sector, which is followed by an analysis of corporate entrepreneurship in the public sector, reviewing the challenges and enablers. The role of innovation in the public sector is reviewed with a view of how the performance of SOEs can be improved. Finally, an analysis on the role played by managers in influencing innovation and the level of influence is explored. In a nutshell, the three independent variables, management support, reward/reinforcement and work discretion, together with innovation as the dependent variable is reviewed in detail.

2.2 Theoretical background to the study

This study is based on corporate entrepreneurship in SOEs in Zimbabwe and South Africa. An analysis of what constitutes entrepreneurship and corporate entrepreneurship is conducted first, which is then followed by literature review of what public entities are with specific reference to SOEs in Zimbabwe and South

Africa. Once an understanding of the public entities is obtained, the theoretical background then focuses of entrepreneurship in the public sector, followed by corporate entrepreneurship with specific reference to public entities. Finally, an analysis of innovation and the relationship it has with the three human capital and organisational factors is done leading to the study's hypothesis.

2.2.1 Entrepreneurship

Before one can talk about corporate entrepreneurship, it is important to understand what entrepreneurship is in general. Schumpeter (1950, 1961) defined an entrepreneur as a co-ordinator of production and agent of change according to the behavioural aspect. He also stated that the functions of entrepreneurs is to reform or revolutionise the pattern of production by exploiting an invention or untried technological possibility aimed at producing a new commodity or an old one in a new way (Schumpeter 1976), while Kirzner (1973) maintains that an entrepreneur initiates change and facilitates adjustment by recognising opportunities for profitable investments. In reviewing this definition, one ponders whether entrepreneurs are also found in the public sector. This study casts some light on whether managers can be encouraged to be entrepreneurial when an organisation supports internal antecedents that encourage innovation.

In reviewing the role of entrepreneurship, Kuratko, Morris and Covin (2008) emphasised that companies are required to achieve sustainable competitive advantage through adaptability, by responding quickly to new technologies and customer needs or regulations without causing significant disruptions, flexibility, which requires them to design strategies, processes and operational approaches that can meet the diverse requirements of all their stakeholders. They are also required to act quickly to emerging opportunities, develop new products and services rapidly and to make quick operational decisions. Added to this, is the requirement to be aggressive by being proactive, in eliminating competition, pleasing customers and growing their employees. Finally, they need to be innovative, by prioritising the development and launching of new products, services, processes, markets and technologies and being the leader in the market place. Thus, these five capabilities make up

entrepreneurship. Therefore entrepreneurship is about creating organisations, change, innovation and wealth.

2.2.2 Corporate Entrepreneurship

After reviewing what entrepreneurship is, it is important to get a good understanding of what corporate entrepreneurship is and how the two are interrelated. Corporate Entrepreneurship, on the other hand, is defined as proactive and entrepreneurial behaviour by which employees pioneer, nurture, drive and manage new ideas inside the organisation, resulting in the company gaining a competitive advantage, (Kuratko et al. 2005). It can also be considered as entrepreneurial behaviour inside an established, mid-sized and large organisation (Kuratko, Morris & Covin 2008). A basic definition involves the origination, creation and application of new ideas and behaviours by a company (Damanpour, 1991), whose perspective centres on innovation, thereby enhancing the company's ability to acquire and act upon innovative skills and capabilities.

According to Stevenson and Jarillo (1990, p. 23-25) corporate entrepreneurship is made up of six propositions which are:

- *"An entrepreneurial organisation is that which peruses opportunities, regardless of resources currently controlled;*
- *The level of entrepreneurship within the firm (i.e. the pursuit of opportunities) is critically dependent on the attitude of the individuals within the firm, below the ranks of top management;*
- *The entrepreneurial behaviour exhibited by the firm will be positively correlated with its efforts to put individuals in a position to detect opportunities; to train them to be able to do so and to reward them for doing so;*
- *Firms which make a conscious effort to lessen negative consequences of failure when opportunity is pursued will exhibit a higher degree of entrepreneurial behaviour;*
- *Not only the success rate, but the very amount of entrepreneurial behaviour will be a function of the employees' ability to exploit*

opportunities;

- *Organisations which facilitate the emergence of informal internal and external networks, and allow the gradual allocation and sharing of resources, will exhibit a higher degree of entrepreneurial behaviour".*

In reflecting on the first framework for integrated corporate entrepreneurship (figure 2.1) below, Guth and Ginsberg (1990) argued that corporate entrepreneurship encompassed internal innovation, through venturing which allows for the establishment of new business within the existing organisation and strategic renewal through the redesigning of initiatives, giving rise to organisational transformation. They further argued that the manifestation of corporate entrepreneurship in organisations will be driven by the external environment, leadership, work environment and company performance. This is illustrated in the framework below.

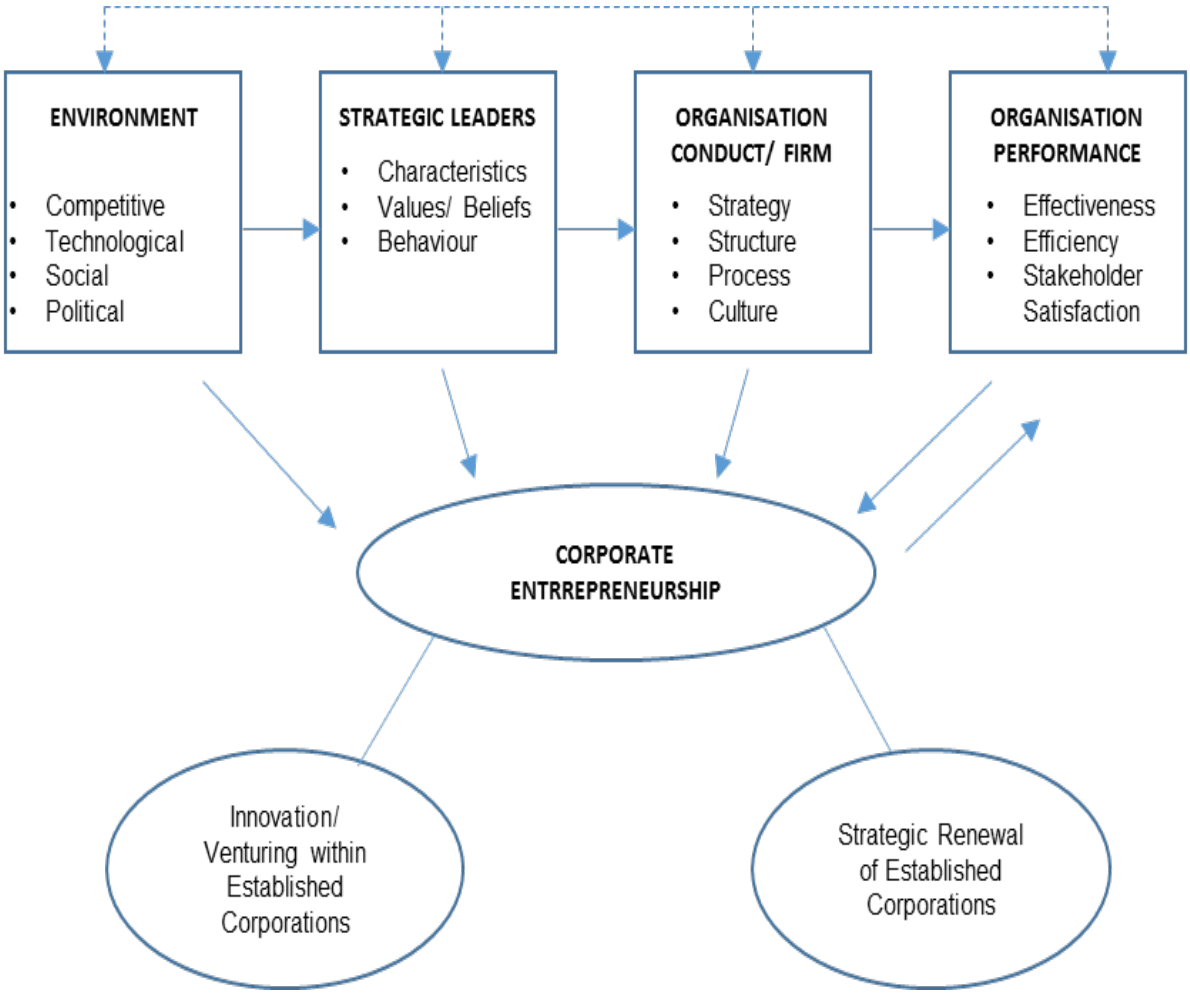


Figure 2.1: Corporate Entrepreneurship. Source: Guth and Ginsburg (1990)

In summary, the various components of this model encompass corporate entrepreneurship and each aspect is explained below:

2.2.2.1 Environment

Major environmental shifts, such as deregulation, can have an impact on organisation strategies, with dynamic or hostile environments forcing companies to be more entrepreneurial. Industry structures and their respective technologies affect opportunities for successful product development, leading to new combinations of resources, resulting in competitive advantage for companies (Ferreira, 2002). Thus this environment has an impact on managers who are faced with limited decision windows and diminishing opportunity streams requiring them to act quickly or they will miss out on opportunities (Kuratko, Morris & Covin 2008).

2.2.2.2 Strategic Leadership

Leadership within a company and the extent the leaders portray opportunity orientation and a willingness to accept change, the values they possess, especially a desire to achieve and being competitive, and their willingness to take risks and to be innovative will all lead to corporate entrepreneurship (Kuratko, Morris & Covin 2008). In a nutshell , top managers, leadership style, middle managers' effectiveness in building coalitions, their values, beliefs and vision is critical in harnessing entrepreneurial behaviour within organisations (Ferreira 2002). According to Quinn (1985), strategic managers cannot apply traditional planning methods to control entrepreneurial venturing as innovation is an uncertain and incremental process.

2.2.2.3 Organisation Conduct

Organisation conduct influences corporate entrepreneurship. Guth and Ginsberg (1990) noted that there are lower levels of research and development amongst firms pursuing strategies of acquisitive growth than those focusing on internal growth through innovation. Covin and Slevin (1991) supported this notion by stating that mission strategies based on building market share had a

higher likelihood of including entrepreneurial ventures based on innovation.

2.2.2.4 Organisational Performance

Entrepreneurial firms are quick to innovate their products and processes. Those organisations that experience performance downturns that then innovate new practices and changes in strategic direction after experiencing decline over a long time, end up making changes at top management levels. Guth and Ginsberg (1990) further emphasised that radical changes and innovation may be triggered in organisations that have excess resources or may be forced by a crisis or several external threats.

2.2.2.5 Corporate Entrepreneurship

Corporate entrepreneurship influences performance with scale of entry in new product, independent venture backed start-ups and corporate start-ups having a positive impact on organisational performance. However early entry in new product markets does not always result in improved performance, with new ventures normally taking a long time to contribute profitably to the company bottom line (Ferreira 2002).

2.2.3 Sustaining Corporate Entrepreneurship

Kuratko, et al. (2004) focused on the organisation's ability to sustain entrepreneurship on an ongoing basis. In the model (figure 2.2) below, they demonstrated that sustainability is dependent on individuals in the organisation's ability to continuously innovate and positive support of such innovation by executive management by allocating required resources. Thus key relationships that will lead to ongoing entrepreneurship are transformational triggers coming either from the internal or external environment posing a threat or an opportunity, which causes the initiation for the need for strategic change. Through entrepreneurship activity which includes new product, service or process, driven by individuals within the company, employees' decision to behave entrepreneurial is key for sustainability. This sustainability will be enhanced once employees perceive the organisation as providing several organisational antecedents, such as top management support, autonomy,

reward, resources and flexible organisational boundaries, they further emphasised. Although the model will not be tested in this study, it gives insight as to how SOEs can enhance and sustain organisational antecedents.

Entrepreneurial behaviour is said to be enhanced when both individual employees and leadership perceive the results to be equitable, or meet or exceed their perception. Burgelman (1983) supported this concept by stressing that top management actions and responses to entrepreneurial individual behaviour may influence the frequency and success of entrepreneurial effort in the firm. Perceived satisfaction with intrinsic outcome they receive for their entrepreneurial behaviour will induce more entrepreneurial activities, which will result in sustainability for the company. The model below suggests that both individual behaviour and organisational strategy are instrumental in making change successful (Kuratko, et al., 2004).

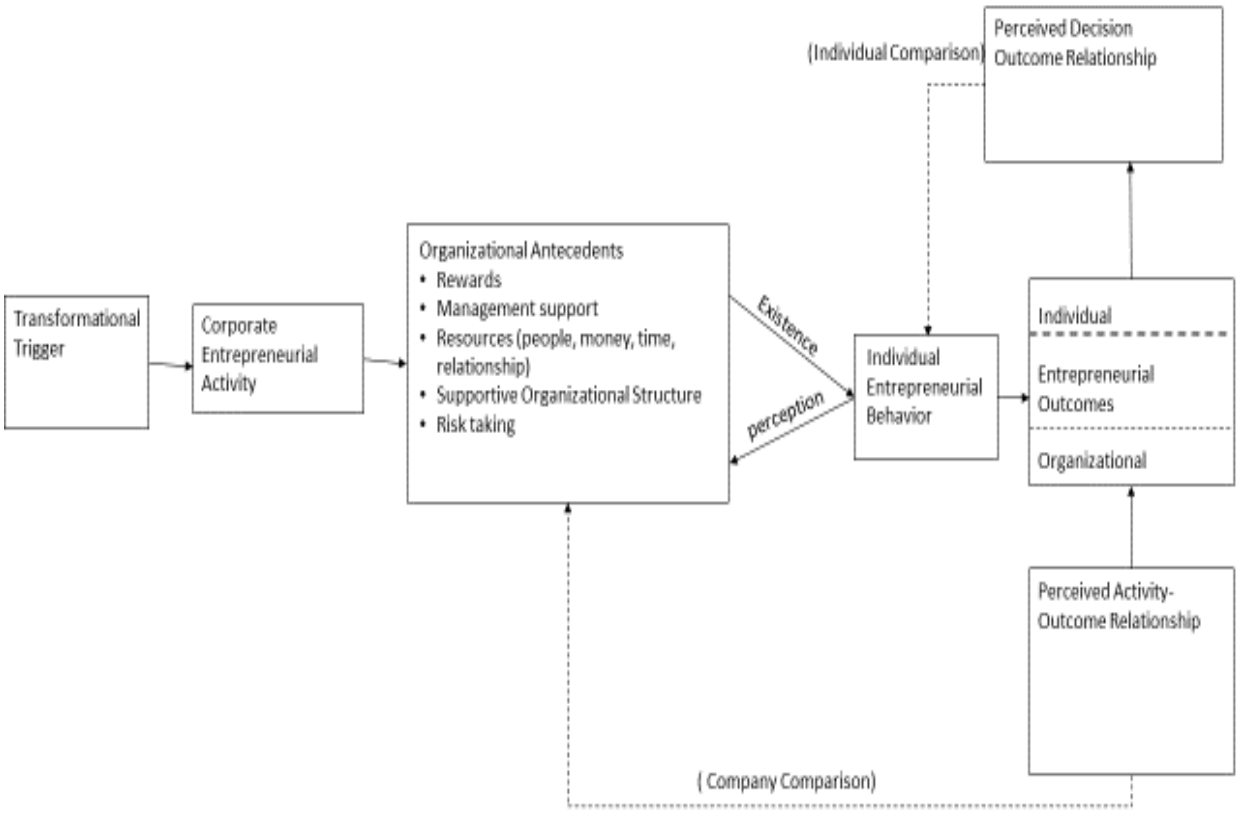


Figure 2.2: Proposed Model of Perceived Implementation / Outcome Comparisons at the

organisational and Individual Levels (Kuratko, Hornsby & Goldsby, 2004, p12)

Now that we understand what entrepreneurship and corporate entrepreneurship is, it is imperative that the concept of the public sector, with specific focus on SOEs, is reviewed in light with how the concepts of entrepreneurship and CE can be applicable in this sector.

2.2.4 Public Sector/ State Owned Entities

According to Kurtatko, Morris and Coven (2008), State Owned Entities are organisations that receive their funding from the government and indirectly from the tax payer and the services they produce have a wider impact, which make their managers have a greater accountability for indirect consequences of their actions. They are also subjected to public scrutiny, therefore transparency becomes key and finally, they face risk and rewards trade-offs that force them to avoid mistakes.

In a nutshell, according to Kurtatko, Morris and Coven (2008), public sector organisations are made up of the following characteristics:

- Pluralism- they are boxed and have to take into consideration the needs of all political interest groups which might oppose the proposed changes.
- Overloaded- high expectation by depended groups who have an expectation that government is there to look after them, which has made it difficult for government institutions to cope.
- Bureaucracies do not seek cost effective process for best performance and often fail to estimate relevant probability distribution for various outcomes.
- Multiple Objectives and Constituencies- administered programmes have vague and conflicting objectives which are driven by the need to achieve consensus.
- Uncertain production functions- efficiency and effectiveness is rarely measured, with little incentives to experiment whether a return on

investment on organisational design, staff and technology is being achieved.

- Input-output measures- performance is measured by input not by outcomes or impact.

- Need for symbols- focus on implementation of visible programs to justify budget requests with political pressure affecting how expenditures are allocated.

- Equity versus effectiveness- program trade-offs are made between effectiveness and equity and as a result of pressure to expand eligibility or entitlement.

- Budget Cycles and floors- One to two-year budget cycles result in the compression of the need to justify resources received and amplify the need to expand on the resources.

- Tenure of senior decision makers- Senior managers and political appointees have short tenures and, as a result, cannot claim any ownership on the organisation, therefore they tend to focus on short term successes.

- Sunk Costs- sunk cost which do not generate positive outcomes are always justified with excuses of too little money expended rather than too much.

- Random Agenda solutions– agendas driven and prioritised are as a result of overriding source of influence.

- Tunnel Vision- bureaucrats are not obsessed with reasonableness but on complete solutions to a given societal problem.

- Inconsistency- rules are not very flexible, giving little leeway to adjust procedures to specific cases.

However the new literature in public administration is of the view that innovation and entrepreneurship developed within public organisations is directed towards

generation of external earnings (Souitaris & Zerbinati 2005). This supported earlier research by Bellone and Goerl (1992) who stated that the public sector is responsible for generating new sources of revenue and providing new services.

In the public sector, and specifically with State Owned entities, the need to acquire and configure resources is the same as in the private sector. Since government organisations play a critical role in delivering social services and are key to the growth of the economy, there have been calls for such organisations to be transformed to entrepreneurial organisations. Osborne and Gaebler (1992) proposed the introduction of market mechanisms, which is core to the reinvention of government. To achieve sustainable competitive advantage, SOE's will have to ensure that resource capitals that are provided by the market are reconfigured and transformed in a manner that supports innovation and growth. Thus, Osborne and Gaebler (1992) considered the following ten areas that government organisations need to review using its resource capitals to be more entrepreneurial:

- Competition: the introduction of competition, resource productivity, enhanced responses to customer needs, innovation and focus on staff morale.

- Citizen Empowerment: Ensure that citizens are involved in ownership and control of services and they do not have a dependency syndrome that expects government to do everything for them.

- Focus on Outcome: performance is measured based on outcomes rather than inputs, thereby creating revenue centres.

- Mission over Rules and Regulations: Purpose rather than rules to be the main focus on decisions and resource allocation, with citizen needs, not programs, being central.

- Customer Orientation: customer service and satisfaction to be the main driver, underlined by value creation, service quality and customer feedback.

- Reactiveness: futuristic approach coupled with anticipation and prevention of

problems before they occur.

- Earning over Spending: generation of revenue through creative user-free structures, non-tax revenues, charging impact fees, renting out of underutilized resources.

- Decentralised: flattened structures that allow for decentralisation of functions, empowerment of staff and reward staff for innovation.

- Partnerships over Adversarial Relationship: collaborating with private and non-profit organisations to develop creative solutions to problems and sharing of resources.

- Other Market Mechanisms: management of both supply and demand and through incentives to private sector suppliers, shared risk taking, tax credits and impact fees to name a few.

In South Africa, SOEs are expected to lead in the provision of modern infrastructure which is key for job creation and economic growth, according to the Presidential Review Committee (2012). They are expected, to some extent, to generate their own income for the effective running of business and not to rely on government financial support. The Committee further highlighted the role that these entities play in the allocation of investments in plants, skills and technology as well as growing the productive base, thereby enhancing the productivity of state assets. The World Bank in its review of South African public entities noted that government needed to pay attention to macro-economic stability, price, wage and interest liberalisation, as well as trade reforms. The Presidential Review Committee (2012) further noted that the World Bank recommended that government was required to stop public entities from operating inefficiently by introducing hard budget constraints, change the institutional relationship between public entities and government, through oversight bodies, increase managerial autonomy, performance and regulatory agreements.

According to Chavunduka, Fauzi, Sifile, Mranda, Mabvure and Dandira (2014), Zimbabwe has 78 state owned entities whose objectives are diverse and are set up either for strategic, developmental and promotional or for commercial

purposes. They emphasised that these enterprises all put together, if fully functional, have the capacity to contribute 40% of the country's Gross Domestic Product. They further stated that most of these entities have been operating at a loss, thereby relying on government subsidies to cover their costs despite the monopolistic position they hold which gives them the ability to enjoy streams of fiscal revenue. This is unlike SOEs in some of the BRICS countries like China and Russia to name a few, which are well run and the introduction of competitive neutrality, especially in China, ensured that no business would be at an advantage because of its ownership, especially by government, thereby ensuring efficiency and a profit orientation culture (Capobianco & Christiansen, 2011). In the 1990s, it became increasingly difficult for the Zimbabwean government to keep underwriting public enterprises' inefficiencies with huge subsidies as there was also pressure from the International Monetary Fund (IMF) and the World Bank to tighten its budgets. Zimbabwean SOEs have been fraught with corruption and unethical practices which saw the country ranking 157 out of 177 in 2013. according to the Transparency International Index Survey (Chigudu, 2015)

2.2.5 Entrepreneurship and Corporate entrepreneurship in the Public Sector

When entrepreneurship is considered from a public sector point of view, Zerbinati and Souitaris (2005) argue that it could be viewed as a by-product of application of strategic management and leadership to public enterprises. Nutt and Backoff (1993) earlier mentioned this concept by emphasising the public sector's likelihood to identify new opportunities and generate new processes and service innovation, through strategic management and leadership, producing long term, external focus, through open communication and participative decision making, resulting in organisational transformation. Mitchel and Scott (1987) proposed that the legitimacy of real administrative authority rests in being entrepreneurial, with Lewis, et al. (1980) adding that public entrepreneurs are differentiated from ordinary managers and politicians by their ability to allocate scarce public resources in a radical way.

Another notion of entrepreneurship in public enterprises was argued by

Osborne and Gaebler (1992), in which they introduced the concept of reinventing centres around downsizing or reducing government size, reengineering, process redesigning, continuous improvement and improving quality standards for service through participative management, bottom up reforms and innate motivation. Stevenson and Jarillo-Mossi (1986) defined entrepreneurship as a process of value creation that brings together a unique combination of resources to exploit an opportunity. It is considered to be the creation of growth, value, jobs, wealth, enterprise, innovation and change. Thus with this understanding of entrepreneurship and entrepreneurship in the public sector, it is therefore critical to review what corporate entrepreneurship is and focus on how it is viewed in the public sector.

Turning our attention to corporate entrepreneurship, Kearney, Hisrich and Roche (2007) focused on the public sector organisations and external environment and the direct impact on performance with the external environment being highlighted as having a fundamental influence on CE. They also cited politics, complexity, magnanimity, change as characteristics of the external environment that can affect organisations' ability to be entrepreneurial. They pointed out that CE enhances the development of opportunities through internal innovation, which then requires action from inspired individuals and groups (Russell 1999). Emphasis is placed on the need to understand factors that inhibit CE so as to overcome these obstacles and with managers focusing on implementing some aspects of successful innovative companies, like work atmosphere, flat structures and interactive learning (Quinn, 1995). Resource availability, management support, work discretion, rewards, time availability and organisation boundaries, according to Hornsby, et al. (1990; 1993) were all identified as key in the successful implementation of CE.

2.2.5.1 Internal Factor Antecedents

According to Hornsby, et al. (1990; 1993), the internal factor antecedents that are critical to the motivation and for sustaining entrepreneurial behaviour for individuals to be innovative if they are fostered in an organisation are listed below:

Top management support refers to the extent that the executives or senior management supports line managers by providing resources and encouragement, thereby nurturing entreprenurial behaviour which motivates the managers to come up with innovative ideas. This support from top management has been proven to directly influence innovative outcomes whilst all management levels play a role in encouraging corporate entrepreneurship.

Work discretion / autonomy, measures the extent to which employees are given the freedom and mandate to carry out their duties without too much oversight and to also try out new things without fear of failure and reprisal. The antecedents of entrepreneurial opportunity recognition are made up freedom to operate, delegation of authority and responsibilities and decision making latitude amoungst employees (Morris & Kuratko 2002).

Rewards/ reinforcement, measures the extent to which organisations reward their employees for entrepreneurial activities, coming up with creative ideas as well as for risk taking. Reward/reinforcement according to Morris and Kurtako (2002) will have a positive influence on entrepreneurial behavour if management are quick to recognise and to provide resources for the implementation of new ideas, especially at middle management level. An effective reward system should ensure that idividuals are allowed to take responsibilities, goals should be clear, constant feedback should be provided and rewards should be linked to results (Hornsby. et al., 1993).

Time availability, refers to flexible work schedules and job structures which gives employees the room and time to pursue innovative ideas. According to Jaworski and Kohl (1996), flexible organisational structures allow for free and open discusions of ideas amongst staff, thereby encouraging successful development of innovative entrepreneurial ventures. Hisrich and Peters (2002) emphasised that time cannot be stored, rented, hired nor bought and yet is very critical at all stages of any ventures. Therefore time is precious yet a limited resource that is perishable.

Organisational boundaries are considered to be critical in the promotion of entrepreneurial activities as they assist with the flow of information within the organisation as well as with the external environment (Miller, et al., 2007). According to Kuratko, Hornsby and Covin (2008), if innovation is treated as structured and purposeful but chaotic through the setting of boundaries which will force, direct and encourage innovation behaviour, then innovation outcomes will emerge predictabily.

Structure Formation: Covin and Slevin (1991) also identified structure formation as having an entrepreneurship outcome with minimum hierarchy being a positive attribute. Thus a flexible, adaptable structure is encouraged as high levels of rigidity and red tape will impinge the development of entrepreneurial culture. Salder (2000) encouraged an organic structure, which is more adaptable, which encourages communication, more democratic as well as loosely controlled for the creation of entrepreneurship culture.

Organisational Culture: Zahra (1993b) also identified organisational culture as influencing and promoting entrepreneurship as it provides the source to managers committing to excellence, thereby encouraging success and survival as well as determining employees' behaviour and commitment. Desson (2004) defined organisational culture as a system of shared values, assumptions, beliefs and norms learned by a group of people through solving problems, adaptation and integration, that can be taught to new members as the right way to think, perceive and feel in relation to a particular problem. Organisational culture has implications to the ultimate organisation vision, mission and values that guide decision making.

Organisational culture is considered to be important as it affects what is considered to be the right decisions, attititudes that stakeholders will have towards the organisation, what individuals consider to be appropriate behaviours, how the whole organisation deals with work assignments, speed and efficiency when delivering projects and finally the organisation's capacity and receptiveness to change (Desson 2004). Culture affects readiness for change, and the change can be created through confronting, developing or

remoulding cultural values to ensure that members will experience profound change in understanding the purpose which will result in them ultimately acting differently (Schein, 2004). Corporate entrepreneurship can be managed effectively when the organisational culture views all staff as intrapreneurs, celebrates both successes and failures and provides an environment that aids and facilitates innovative direction and process (Knight 1996; Legge & Hindle 1997).

Risk Taking was also recognised as an antecedent of corporate entrepreneurship with public sector organisation tending to be risk averse due to exposure to greater scrutiny. Risk aversion inhibits entrepreneurial behaviour and public sector organisations are encouraged to embrace risk taking as their policy environment is not always predictable and stable (Ford Foundation, 1996). Proactiveness, which is concerned with ensuring that work / projects are successfully completed, is a key element of entrepreneurship. It refers to anticipation and acting on future wants and needs of the market place (Lumpkin & Dess 1996).

Proactiveness requires a high level of commitment, flexibility, adaptability and a willingness to take responsibility for possible failure. According to Morris and Jones (1999, p. 76) “proactiveness entails an action orientation and an emphasis on anticipating and preventing public sector problems before they occur. This action – orientation includes creative interpretation of rules, skills at networking and leveraging of resources and a high level of persistence and patience in affecting change”

However, for the purpose of this study, the focus will be on the intra-organisational environment of top management support, reward and reinforcement and work discretion, as they can provide enough evidence of innovation in the identified organisations.

2.2.5.2 External Environmental Factors

Having said that, it is also important to highlight the external environment of the public sector and its influence on corporate entrepreneurship as highlighted in

the CE model of public sector below (figure 3). According to Nutt (2006), the external environment of public organisations is littered with political considerations which entail constant changes in policy and imposition of short term plans on managers. Economic considerations take a back seat with the opinion of leaders, manipulation by legislators and interest groups compounded by opposition to agency's prerogatives taking the front seat (Levine, et al., 1975). Over and above the political constraints, the organisations also face complexity as the environment is highly turbulent, more complex and dynamic than in the past. Responses to changing circumstances is affected by scarce resources as well as management philosophies and organisational structures (Morris & Jones, 1999).

Other elements of the external environment include munificence which refers to the environment support for growth, which incorporates dynamism, technology opportunities, and demand for new products (Zahra, 1993a). The munificent environment is a catalist in building slack resources which assist in conflict resolution as well as giving organisations access to external resources utilised to support during turbulent periods (Hambrick & Finkelstein, 1987). Change, which is another factor, especially in relation to perceived industry decline, will result in increased renewal activities, or new product demand which presents demand pull which will encourage intrapreneurship (Zahra, 1993 a). Thus, dynamism, new products, growth in industry and technology opportunities are all positively related to corporate entrapreneurship.

Lastly, the growing interest in corporate entrepreneurship is as a result of public organisations' desire to perform which can be achieved through creativity and innovation as they overcome challenges. Organisational performance will therefore be achieved by organisations that engage in corporate entrepreneurship. Growth and profitablility are the tangible elements that signify the consequences of corporate entrepreneurship (Antoncic & Scarlat, 2005). They further emphasised that it is therefore critical that an environmment that facilitates successful management and adaptability to the external environment is created, which will build the capacity for developing an entrepreneurial organisation that will reward managers and staff for behaving entrepreneurially.

The public sector organisation faces a number of challenges when it comes to the implementation of entrepreneurship. The managers are ristricted from taking high risk pursuits as they are accountable for tax payers money, which forces them to focus rather on incremental change than bold innovation (Kuratko, Hornsby & Coven, 2008). They futher emphasised that the time entrepreneurship projects take to unfold does not fit in with budget cycles. The disruptive nature of entrepreneurship affects the status quo bringing with it potenial inconsistency. Public sector managers are limited by legislation and regulations to use resources formally allocated, which will be in contradiction with entrepreneurship which requires the pursuit of opportunities, regardless of controlled allocated resources.

In summary, the public sector CE model, as illustrated below (figure 2.3), examines several essential characteristics which include public sector organisations and the external environment and how these directly and indirectly impact on performance. An organisation's ability to engage in entrepreneurial activities can be affected by structure, decision making, rewards and motivation, the organisational culture, risk taking propensity, and proactivity of the individuals within an organisation (Kearney, Hisrich & Roche, 2007). On the other hand, the external environment has a rudimentary causation in influencing corporate entrepreneurship, with politics, complexity, munifence and change affecting entreprenurial activities.

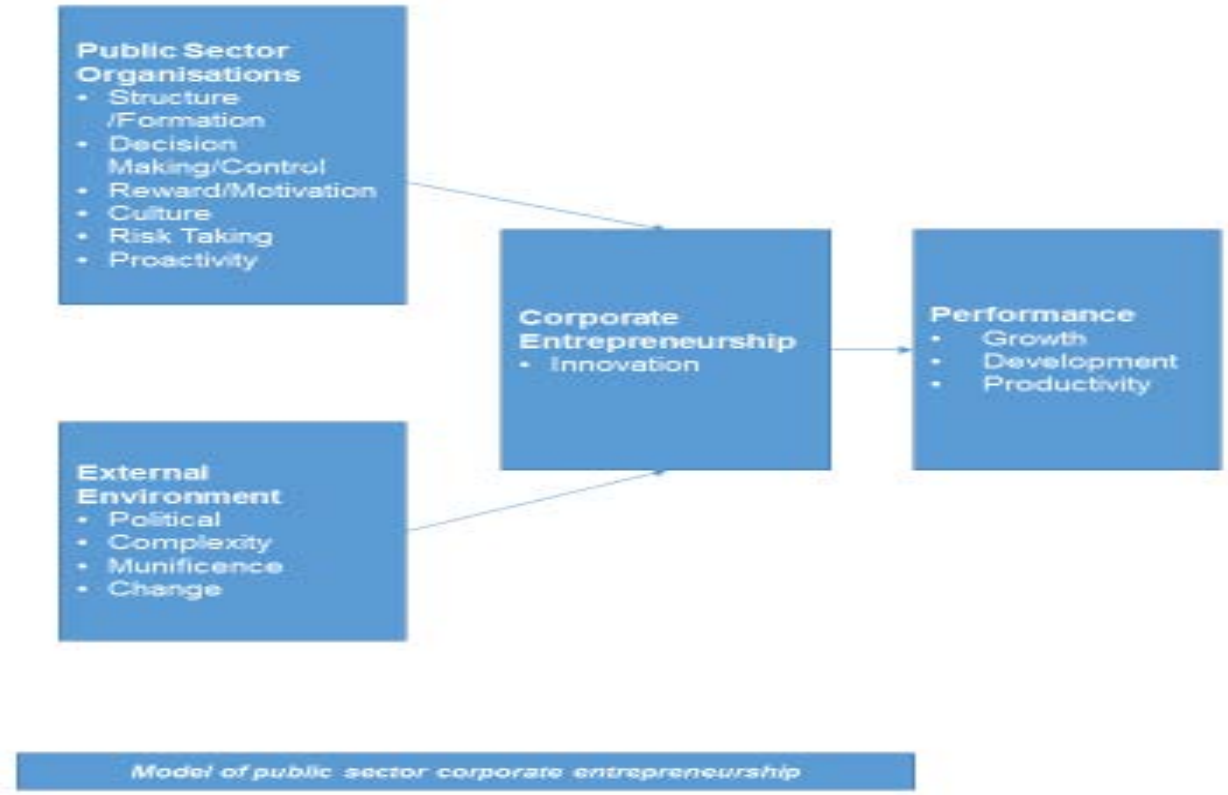


Figure 2.3: Public Sector Corporate Entrepreneurship Model (Kearney, Hisrich & Roche 2007)

2.2.6 Innovation

The study focused on the relationship between innovation as a dependent variable, which is part of CE and the independent variables made up of management support, work discretion and reward and reinforcement. It is therefore important to review what innovation is in general and how it is implemented in the public sector. Innovation is defined as the initiation, creation and implementation of new ideas or behaviours, which can include a new product, service, process or system, (Hornsby, et al., 2002). Tseng, Kuo and Chou (2008) argued that innovation can be more important than land, capital or labour as it appears to be the only way that companies can configure change into opportunities. They further stated that innovation ability is determined by organisational and procedural capabilities that enable the

innovation process. For the purpose of this study, technological innovation which is viewed as improvements in computer power and communication, organisational innovation which is innovation that relates to effectiveness and efficiency and lastly, human capital innovation, which is collective capability aimed at achieving optimal solutions from employees' knowledge, will be considered as a measure for CE (Tseng, Kuo & Chou, 2008).

According to Kuratko, Hornsby and Covin (2014), innovation is considered to be the pathway for organisation to increase their pace of change in a competitive global environment, with corporate entrepreneurship being considered to be key in the organisation's efforts to innovate constantly and dealing with competition in the global market. They further emphasised the role that individuals in organisations play, when they are given freedom to pursue actions and initiatives despite existing company rules. Kuratko (2014, p 68) crystalised the notion by stating that "ideas come from people. Innovation is a capability of many". Zahra, Neubaum and Huse (2000) highlighted the role that management plays, stating that strong managerial support and a conducive organisational setting which fosters CE, leads to success in innovation and venturing.

When innovation is viewed from a public sector perspective, Kearny, Hisrich and Roche (2007) and Peled (2001) defined public innovation as a political process that drives organisations to launch new projects, which give rise to the change of rules, roles, procedures and structures related to communication and exchange of information. Spence (1994) defined it as something new to a given situation. The pressures to improve on service and process efficiency in the public sector can be lightened if they can learn to manage innovation. The study of innovation in the past was considered as a private sector phenomenon, with the public sector being viewed as monopolies with no competitive pressure to innovate and its open system being considered as an impediment to innovation.

Wildrum (2008) identified six types of innovation in the public sector as 1) Service innovation aimed at improving the quality of existing service, 2) Service delivery innovation aimed at creating or adjusting methods of service delivery, 3) administrative and organisational innovation, aimed at changing

organisational structure within the organisation, 4) policy innovation, which according to Sabatier and Weiber (2014), is aimed at changing the way of thinking or behaviour associated with political belief system, 5) systematic innovation which is aimed at changing and improving interactions with other agencies or knowledge bases and finally, 6) conceptual innovation which deals behaviour and attitudes which are said to predict intentions.

Innovation therefore can be considered as part of CE which can be manifested in companies either through corporate venturing or strategic entrepreneurship (Morris et al 2011), with corporate venturing relating to innovation that is created within the organisation and is owned by the company and is kept within the existing corporate structure. The second innovation within corporate venturing is external corporate ventures which are formed outside the organisation, which involve new businesses created by outside parties and the corporation invests or ultimately acquires these. Strategic entrepreneurship, on the other hand, is innovations in the firm's chasing of competitive advantage which can be found in the firm's strategy, product offering, organisation structure, processes and capabilities, served markets or business models (Kuratko & Audretsch, 2013). A firm can manifest strategic entrepreneurship through how much it is transforming as compared to where it was before or how much it is transforming relative to industry conventions or standards. According to Coven and Miles (1999), strategic entrepreneurship can take the form of either strategic renewal, sustained regeneration, business model reconstruction, organisational rejuvenation or domain redefinition.

Another form of innovation, especially in African countries, has been that of the reinvention of government, which includes changing political system or restructuring to create more efficiencies. It also takes the form of downsizing the government or privatisation, which in some cases, has resulted in the reduction of waste, fraud and abuse (Chebet, & Rotich, 2015). According to Osborne and Gaebler (1992), reinvention of government is about replacing bureaucratic organisations and behaviours with entrepreneurial organisations and behaviour. They further stated that it is about creating public organisations that continuously innovate and improve quality without being pushed by external

factors. It is about creating self-renewing systems with a culture of continuous change. Reinvention in developing countries has been credited with the emergence of entrepreneurial governments, which hold employees accountable for results, with customers who have choices and the organisation having the capability to compete with private organisations.

Effective innovation in the public domain will happen once the inhibitors of innovation are understood and ways to overcome them are identified. Public management academics emphasised the notion that innovation within the public sector will clash with traditional values such as due process and accountability (Goodsell, 1993; Terry, 1998). Managers in the public sector are considered to be less flexible compared with their counterparts in the private sector (Rhinehart, et al., 1976). They further stated that public sector managers have lower organisational commitment, lower satisfaction of work need, and lower job satisfaction. This was supported by Boyne (2002), who cited lower organisational commitment due to inflexibility of personnel procedures and misalignment of performance and rewards. Public scrutiny has resulted in low incentives and motivation to be innovative. Due to the fact that public sectors are monopolies, it is urged that they are under no competitive pressure to innovate. According to political scientists, stringent central agency constraints put in place to minimise corruption and ensuring that processes are complied with also act as an impediment to innovation (Borins, 2002).

Borins (2002) further argued that opposition parties and the media's interest in exposing the sector's failures acts as the biggest impediment to innovation. Delivery pressures and administration, short term budgets, poor reward system, risk aversion, poor risk and change management skills, fear of failure are some of the factors that have been identified as impeding innovation in the public sector, according to Kearny, Hisrich and Roche (2007).

Borins (2001) also provided empirical findings, about the obstacles which included bureaucracy, namely hostile attitudes, internal conflict, challenges in co-ordination, logistical problems, low staff morale, middle management resistance and opposition as the first category of obstacles. The second group

of obstacles consisted of lack of funding or resources, regulatory constraints and political opposition. The final category included public doubt about projects' effectiveness, difficulties in accessing target groups and opposition from the private sector who might view the new projects as competition.

Borins (2001) proposed that these obstacles can be overcome by applying tactical approaches which include showing the benefits of innovation programs to the opposition, demonstrating and social marketing. Accommodation approaches, including training, involving the opposition in the projects, compensation of affected parties and consulting opposition would also overcome barriers. Finally, having a clear vision, ensuring that there are enough resources, recognition for participants will assist in the breaking down of obstacles. This further proves that for innovation to be effective, it has to be effectively managed and should be aligned to organisational strategy, should be integrated in the organisation and should become part of the organisational behaviour pattern (Kearny, Hisrich & Roche, 2007). An innovation culture in the public sector can be cultivated through achieving and learning from successful cases of implementation and innovation. In conclusion, Borins (2001) argued that public sector organisations will be more innovative if an innovation culture is supported from the top, through the implementation of an encompassing reward system, allowing for work discretion, making funding available, and giving staff room to experiment.

2.2.6.1 Innovation in African public sectors

Economic and fiscal pressures have created a demand for change for many public sector organisations in Africa, with South African and Zimbabwean entities being forced to implement reforms. Public sector deficit, growing indebtedness and external trade imbalances has been the major driver of restructuring in the public sector, resulting in downsizing, privatisation and contracting to respond to fiscal deficit control (Chebet, Tubey & Rotich, 2015). The delivery of services through bureaucratic organisational arrangements was found to be ineffective and inefficient causing organisations to look for alternatives, with the old public administration being considered to be driven by rules instead of focusing on performance. They further added that the rise of

new right politics that were pro-market and pro-private sector started challenging welfare states as unsustainable with the growth of management ideas, packaged and marketed by international consultants forcing bureaucracies to change.

The application of New Public Management reforms was as a result of donor advocacy with organisations like the IMF and World Bank pushing for a pro-market and pro-private sector stance in structural adjustment programmes. Chebet, Tubey and Rotich (2015) emphasised that the spread of global markets with the resultant competition has forced public sectors in most countries to reshape themselves to keep pace with the global economy. Finally, the growth and use of new information technology, has facilitated changes in performance management, executive agencies and management decentralisation of public services.

According to Pollit (1990), New Public management (NPM) approaches, which are ideological thought systems based on private sector ideas implemented in the public sector have been gaining prominence with some key components including the breaking up of huge bureaucracies, replacing traditional tall hierarchies with flatter, flexible structures, separation of funding, purchasing and provision of services, decentralisation of management authority, devolving budgets and financial control to decentralised units, capping budgets and making them more transparent and a shift to output orientation.

The NPM reforms in Africa have mostly featured through decentralization and civil service reform programmes. According to Hope and Chikulo (2000), most of the decentralisation in the last ten years was driven by political thinking that for a government to be considered to be good, it had to be seen to be closer to its people, spreading multiparty political systems that create a demand for more local voice in decision making. Deconcentration, delegation, devolution and privatisation reforms have featured the most, with deconcentration in countries like South Africa and Zambia creating independent revenue authorities with corporate outlooks all aimed at improving efficiency and accountability of tax collection beyond Finance Ministries.

Delegation, which is the transfer of specific authority and decision making

powers to organisations outside bureaucratic structures and was considered to be a way of providing public goods and services thorough business-like organisational structures has been used extensively in Africa, with Kenya using public corporations to organise finance and manage large scale agricultural projects and in Botswana and Ghana where autonomous hospitals were established to improve on efficiency in service delivery (Larbi, 1998; 1999).

Devolution which is the imparting of decision making powers to lower authorities or managers giving them full responsibility without reference to authorising governments has been prevalent in Ghana which put in place financial management programs giving managers greater control of their budgets (Larbi, 1999). Privatisation which is the transfer of operational control and responsibilities for government functions and services to the private sector has been prevalent in most African countries. The most common types of privatisation have been commercialisation of government services, joint venture and selling of government services to the private sector. According to Hope (2001), privatisation in Africa has become desirable as most state owned enterprises have been making losses, thereby causing funds that could be better used somewhere to be diverted to them and their outlook has been made worse by high levels of corruption and political interference.

2.2.6.2 Innovation in SOEs in Zimbabwe and South Africa

Key to this study is an assessment of how innovation has been applied in both South African and Zimbabwean entities. Therefore it is important to review some innovation initiatives that have been implemented in both countries and their successes, if any, and the part played by human capital to encourage innovation through internal organisational factors.

2.2.6.3 Innovation in Zimbabwe's SOEs

According to Rusvingo (2014), Zimbabwean SOEs have been associated with looting, corruption by senior government official, aided by bootlicking managers, using the looted funds for political campaigns and overseas trips and poor service delivery. He further stated that Board members who were expected to be upholding Corporate Governance principles had become part of the problem,

milking the underperforming entities through inflated fees, fuel and allowances. This state of affairs is applicable to some of the SOEs who form part of this research. The National Regulatory Social Security Authority (NSSA) executive team was fired in October 2015. According to The Sunday News Reporter (October, 2015), it is alleged that they were awarding themselves salaries above the stipulated rates, receiving extra income from the entity investment arm through interest free loans, buying themselves expensive cars at the expense of taxpayers. This resulted in the new board calling for the restructuring and realignment of the organisation to ensure that the corporate governance, as outlined in the National Governance Code, is upheld.

NetOne, another SOE in Zimbabwe which forms part of the research has also undergone a top management shakeup. According to Newsday Reporter (October, 2015), quoting Mr Marufu, the Board chairperson, the restructuring exercise with 24 top jobs being advertised, was aimed at pursuit of innovation in all areas, compliance with governance structures and development of employees to ensure continuity all aimed at turning around the organisation which had not brought any meaningful return to its shareholder. Issues of governance were also highlighted as one of the reasons for the poor performance of the organisation as compared to its competition, Econet.

Zimbabwe adopted public enterprise management reforms as innovation measures and at the same time, adopted a subsidy policy creating a state dependent public enterprise sector whose capital base was virtual loan capital (Zhou, 2001). As a result, the parastatal system did not motivate management to be accountable for performance due to the bail out system. In 1991, the Zimbabwean government embarked on public enterprise sector reforms which were initiated under an Economic Structural Adjustment Programme (ESAP), aimed at improving the macro and micro context by removing restrictions resulting in liberalisation and deregulation of the policy framework. The policy was aimed at reducing reliance on subsidies of SOEs, improving operational visibility, through organisational and managerial restructuring.

The changes resulted in government relaxing its direct controls on the operation

of SOEs thereby giving more autonomy to parastatal boards and management in micro decision making in areas such as price setting, investments, hiring and firing (Zhou, 2001). The implemented reforms did not yield positive results, with the public enterprise sector performance deteriorating significantly during the reform period (Zimprest, 1998). There were record losses amounting to $2 billion in 1993/4 and $1,8 billion in 1994/5 fiscal year, which were due to government control systems which were still intact as well as legislation governing labour, investment, borrowing, reporting and public procurement.

Zimbabwe went through another phase of economic restructuring which focused on the unbundling route. Targeted enterprises were broken down into smaller business units which were 100% state owned holding companies (Chavunduka, et al., 2015). Despite decades of reforms they further emphasised that Zimbabwean public enterprises remained a sad tale of loss making and debt ridden entities. The state still holds majority shareholding thereby rendering the policy shift from interventionism to market based management styles useless.

The internal organisational culture of most SOEs in Zimbabwe is clan based with the main focus being of motivation, social cohesion and a participatory management style, unlike the advocacy culture which promotes dynamism and adaptability, creativity and enterprising spirit, with the ability to take risks to develop the business. In a study by Mapetere, et al. (2012) on leadership in SOEs in Zimbabwe, it was found that the reward structures which encourage innovation were not sustainable due to the hyper–inflationary environment. According to Bass (1985), there is a need of leadership behaviours that can sustain long term strategy implementation activities. Their research also showed that there was a perception that top leadership, through their technical skills, was expected to spearhead strategy implementation and drive change throughout the organisation. However, due to the turbulent environment in Zimbabwean SOEs, it was concluded that technical skills on their own were not strong enough to sustain change, but there was a need to emphasise human skills that can solve personal problems and induce commitment, ownership and involvement of general staff.

Zimbabwe has one of the highest literacy levels in Africa with most of SOE employees having worked in their positions for a long time, as the formal unemployment rate is between 80-90% (Times Live, 2015). This gives managers a high level of work and technical experience, combined with high level of education which is key for the implementation of innovation. Based on the results of the survey conducted by Mapetetere, et al. (2014) that indicated that 65% of the respondents did not believe that top management was able to craft clear vision for strategy implementation. This could be the reason why most SOEs are failing, notwithstanding the economic climate, which also has an influence on resource availability for innovation.

According to Makamure (2014), there have been positive steps taken by the government to improve the state of affairs of the Zimbabwean SOEs. He cited reforms announced by the Ministers of Finance and Economic Development in September 2014, which included the amending of the Public Management Act, which would address corruption problems, by tightening the legislation to also cover parastatals, the introduction of the governance code, which entails ensuring that “pubic funds are expanded transparently, prudently, economically and effectively and fiscal reporting must be clear” (Rusvingo, 2014, p. 3). Makamure, as part of his input to government legislation, also recommended that the Public Finance Management Act be aligned to section 308 of the constitution and penalties in the current act should be revisited to ensure they are a deterrent to any would be offenders. The Minister also announced the amendments to the remuneration policy framework aimed at addressing anomalies, as well as the enforcement of performance accountability by both the Board and the Executive team which will be required to enter into performance agreements and submit performance results timeously. With Zimbabwe relying on resources to turn around its economy, diversification will be key due to lower prices of commodity and a push to attract foreign investment which will only materialise if it improves its ease of doing business.

Since the external environment has been recognised as a fundamental determinant in influencing corporate entrepreneurship (Miller 1983), it is critical

that the Zimbabwean government work on all the elements identified below. The results below, as per the World Bank report on the ease of doing business, is discouraging for foreign investments. Zimbabwe is ranked 182 out of 189 in terms of ease of starting business, as reflected in figure 2.4 below, thereby requiring it to reform process required for companies to obtain licences and permits when setting up a business. It has 9.00 bureaucratic and legal procedures, which takes 90.00 days and costs 112.00% of income per capita to start a business (Doing Business, World Bank, 2016). Electricity availability is critical and forms the cornerstone of any economy. Therefore having access and affordable electricity is vital for any business.

The country goes through load shedding on a daily basis which affects industry's capacity to be productive. The report further emphasised the need for the country to review and improve all identified factors for corporate entrepreneurship and especially innovation to contribute to performance enhancement of the sector.

Scale: Rank 189 center, Rank 1 outer edge

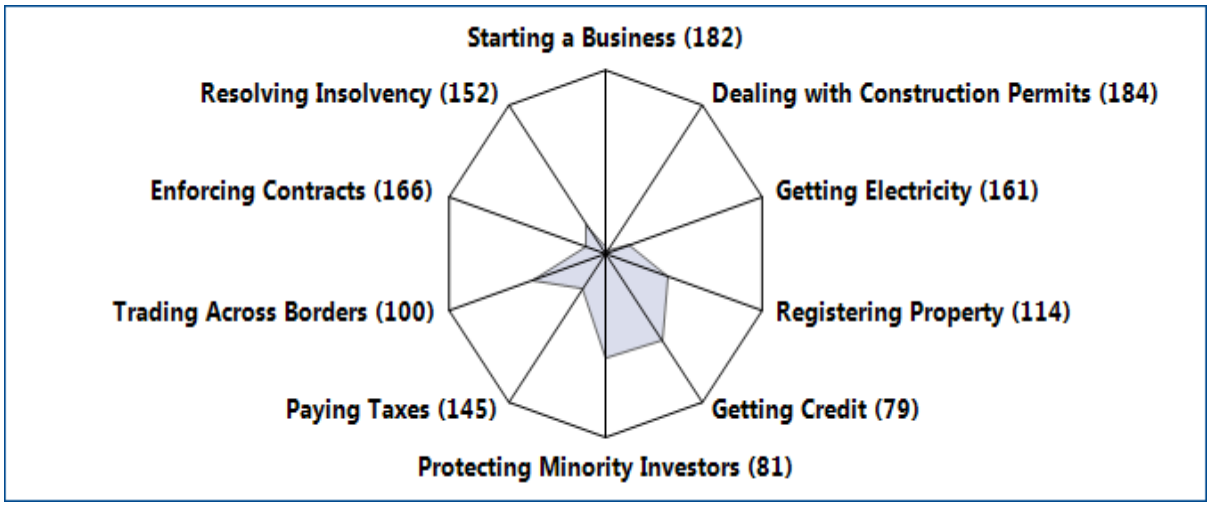


Figure 2.4: Rankings on Ease of Doing Business - Zimbabwe (Source: Ease of Doing Business, World Bank, 2016)

However this research is aimed at establishing whether the challenges faced by Zimbabwean SOEs in the current economic climate make them more innovative for survival. It also reviews whether the changes implemented amounted to improvement of performance for SOEs and the country's economy as a whole. This has not been a focus area for many researchers, therefore results of this research will add to the empirical evidence which is currently missing.

2.2.6.4 Innovation in South Africa's SOEs

According to the Presidential Review Committee (PRC) report (2011), the main purpose of South African SOEs is to contribute to growth, development, creation of decent opportunities as well as social and economic transformation of the country. To ensure effective financial performance of South African SOEs, the committee recommended four key focus areas namely; having a clearly defined, communicated and consistent strategy, having a legal framework that supports SOE performance, the purpose of SOEs should be clear, with standardised monitoring and evaluation models and finally, for them to meet economic and developmental objectives they must have high operational performance, with the ability to attract and retain skills as well as access to funding.

When the ANC government came into power in 1994, the role of SOEs was reviewed with the government adopting both nationalisation of some of the entities and limited privatisation for others (PRC 2011). However, due to the need to raise capital for some of the key programmes, they also embarked on commercialisation, resulting in the sale of equity in some of the entities. According to PRC (2011), by 2010 the number of SOEs in South Africa had increased and they had created 150 000 jobs. They further stated that the role of SOEs was also affected by some of the policies adopted with the New Growth Path of 2010 calling for the creation of decent work, reduction of poverty and inequality and IPAP2 calling for industrial development. A summary of all the restructuring programmes embarked on is represented in figure 2.5 below dating back to pre-1994. These reforms were targeted at achieving specific political objectives as set out by the government.

Despite all the changes that were implemented, the public sector in South Africa is said to lack efficiency, co-ordination and systemic dynamism. With it controlling 40% of the GDP, it is critical that SOEs improve their performance to remain competitive globally (CPSI, 2007). According to Ensor, in the Business Day (Dec 4, 2014), the state of SOEs in South Africa was of great concern with widespread governance and management issues, operating and balance sheet stress, political interference and non-delivery of service. There is a call for South Africa to follow the Chinese example by modernising its SOEs.

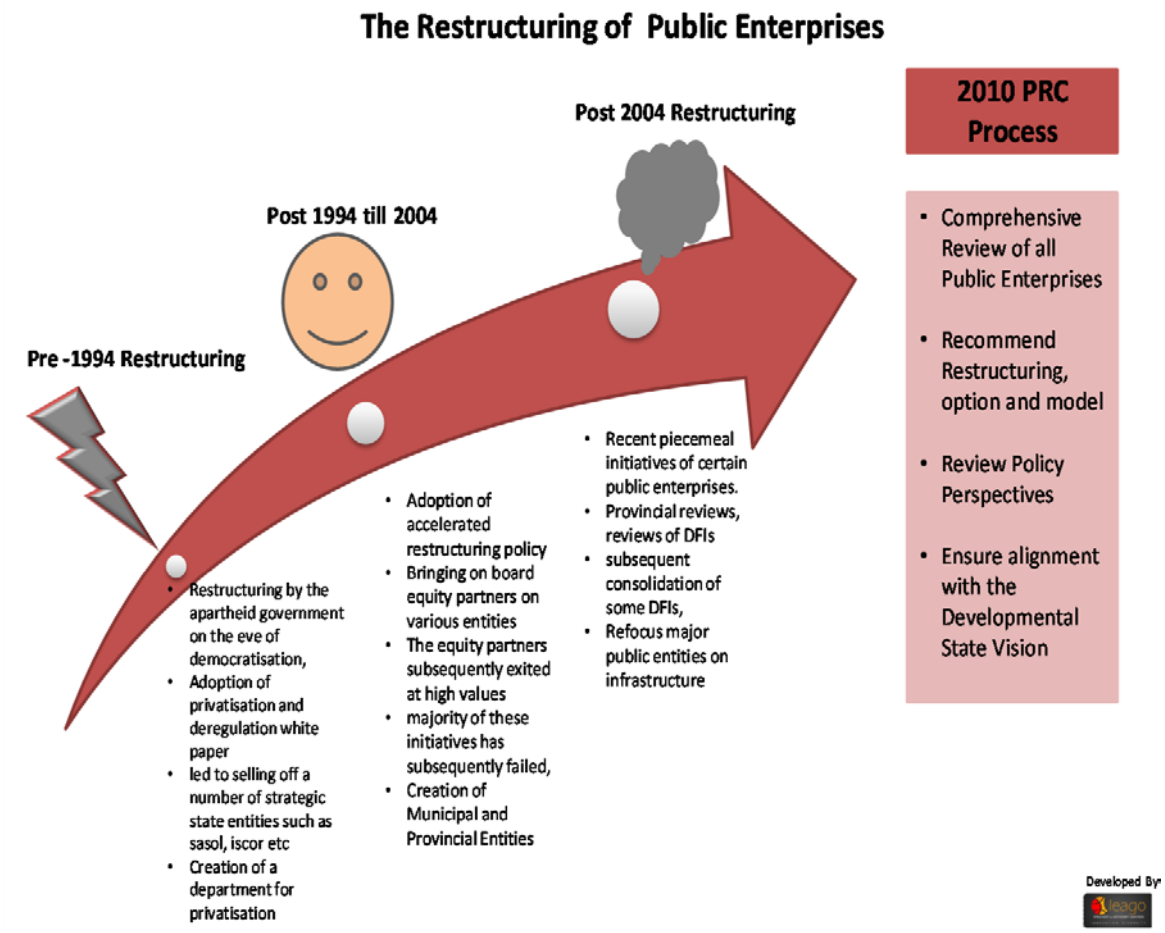


Figure 2.5: Restructuring of Public Enterprises (Source: Presidential Working Committee, 2012).

McGregor (2014) has recommended the creation of a corporate governance model and implementation framework, feasible policies and strategies, a central cabinet function which will oversee the overall standards of corporate governance, development of a decisive, inspirational and consistent leadership, creation of an integrity and professionalism culture, radical upgrading of standards of ministers, CEOs, Board chairs and Director Generals and lastly, an effective working relationship with staff at all levels. Further recommendation is for South Africa to improve on its ease of doing business and electricity supply. Figure 2.6 below illustrates some areas of concern that can have an impact on its foreign investment attraction plans. Focus will be on the improvement of getting electricity, enforcement of contracts and trading across borders for it to be competitive on the global platforms.

Scale: Rank 189 center, Rank 1 outer edge

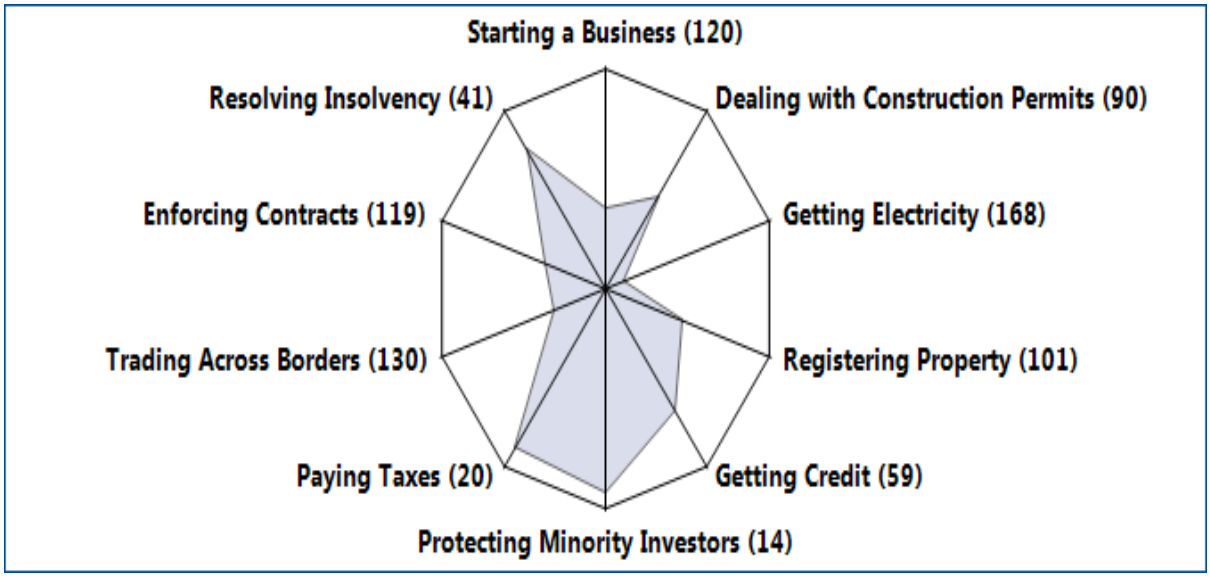


Figure 2.6: Rankings on Ease of Doing Business topic - South Africa (Source: Ease of Doing Business, World Bank, 2016)

Just like Zimbabwe, most of the boards and their executives have been accused of wide spread corruption, flaunting tender processes and maladministration. Most CEOs of these entities were either fired or resigned, with the CEO of the public pension fund having been suspended in October 2015, for signing an unauthorised contract with a communications company; with the board accused for not being independent, Telkom has seen five CEOs and four Chairs over the past 7 years and with a 45% earnings drop; Eskom nominated as the worst company in the world in 2013 and CEOs being paid off to leave their positions or fired (McGregor, 2014). The only entity included in this study which has recorded success in its dealings is the Industrial Development Corporation (IDC), which is a self- financing national development institution.

Now that we understand the state of SOEs in the two countries and some reforms that have been implemented, it is critical to assess the role that human capital plays in the corporate entrepreneurship process.

2.2.7 Human Capital

Innovation is driven by the human capital in an organisation. As such, it is critical that organisations invest in internal organisation factors that motivate human capital to be innovative. Human Capital comprises an individual's knowledge, skills and abilities which facilitate change in action and economic growth. Venter, Urban, and Rwigema, (2008) stated that human capital theory argues that knowledge provides individuals with increased cognitive abilities, which facilitates productivity and efficient activity. Zarutskie (2008) argues that the human capital construct is made up of individual education levels, educational speciality, work background and tacit knowledge, with Hambrick and Mason (1984) adding that it invokes upper echelon theory that maintains that entrepreneurial or top management teams have great influence on firm performance. Peteraf (1993) summed up the notion of human capital as having a strong influence on the resource based view of a firm.

However, the configuration and employment of human capital is important in providing firms with the capability to be entrepreneurial and innovative. How skills and knowledge are employed in organisations determines the level of innovation and top management's ability to strategise, create a compelling vision, manage these resources and reward them accordingly will create an environment where innovation will foster (Mapetere, et al., 2012). According to Kuratko, et al. (1990), top management is expected to champion innovative ideas and provide required resources. They further argued that there is enough evidence to prove that the support of top management has a direct positive influence on innovative outcomes at all levels of management.

There is enough evidence to suggest that human capital affects firm performance. Therefore managers who are part of the firm's human capital provide a source of competitive advantage. Managers become a competitive advantage of their firm when they engage in entrepreneurial behaviour that is valuable, rare, and imperfectly imitable and for which no substitutes exist (Hitt, et al., 2001). It is therefore important to understand the DNA of a corporate entrepreneur who drives innovation in the organisation. Once understood, it will be the role of the managers to identify these individuals and provide them

with resources to be creative and innovative. In a corporate environment, the entrepreneur is an employee who takes ownership of creative ideas and ensures that they are implemented, by overcoming obstacles and finding critical resources (Kuratko, Morris & Covin, 2008). They further summed up the profile of corporate entrepreneurs as being achievement–motivated, task and challenge driven and not always motivated by financial rewards, although these count.

They cited them as people who turn ideas into profitable realities, are drivers and implementers of innovative projects, who build teams that are motivated to see projects to fruition. They desire autonomy, access to resources, have a need for security, but at the same time, want to be rewarded and recognised for the effort they put in. They can be cynical about processes and systems, but also believe they can find ways around rules and bureaucracy. They are said to be politically adept but are also willing to get their hands dirty and ensure that the task is done. They represent a strong mix of vision and depth, they are dreamers who do. According to Barringer and Bluedorn (1990), due to the dynamism and complexity of today's environment, entrepreneurial attitudes and behaviours are key for companies to succeed, therefore, it is critical that organisations cultivate employees' interest in and commitment to creativity and innovation which will contribute to successful competition.

2.2.8 Corporate Entrepreneurship process related to managers

The role that managers play in the organisations to drive innovation or encourage entrepreneurship has been cited as key to the successful implementation of corporate entrepreneurship in organisations. If SOEs in South Africa and Zimbabwe sought to improve on their internal organisational factors, it will be key for them to effectively manage and understand the corporate entrepreneurship process in relation to managers. Thus, it is critical to understand the antecedents that encourage managers to behave entrepreneurially and the triggers of CE that organisations have to manage. Figure 2.7 illustrates how external triggers and organisational antecedents play a role in the corporate entrepreneurial process in relation to managers, followed by an analysis of the model.

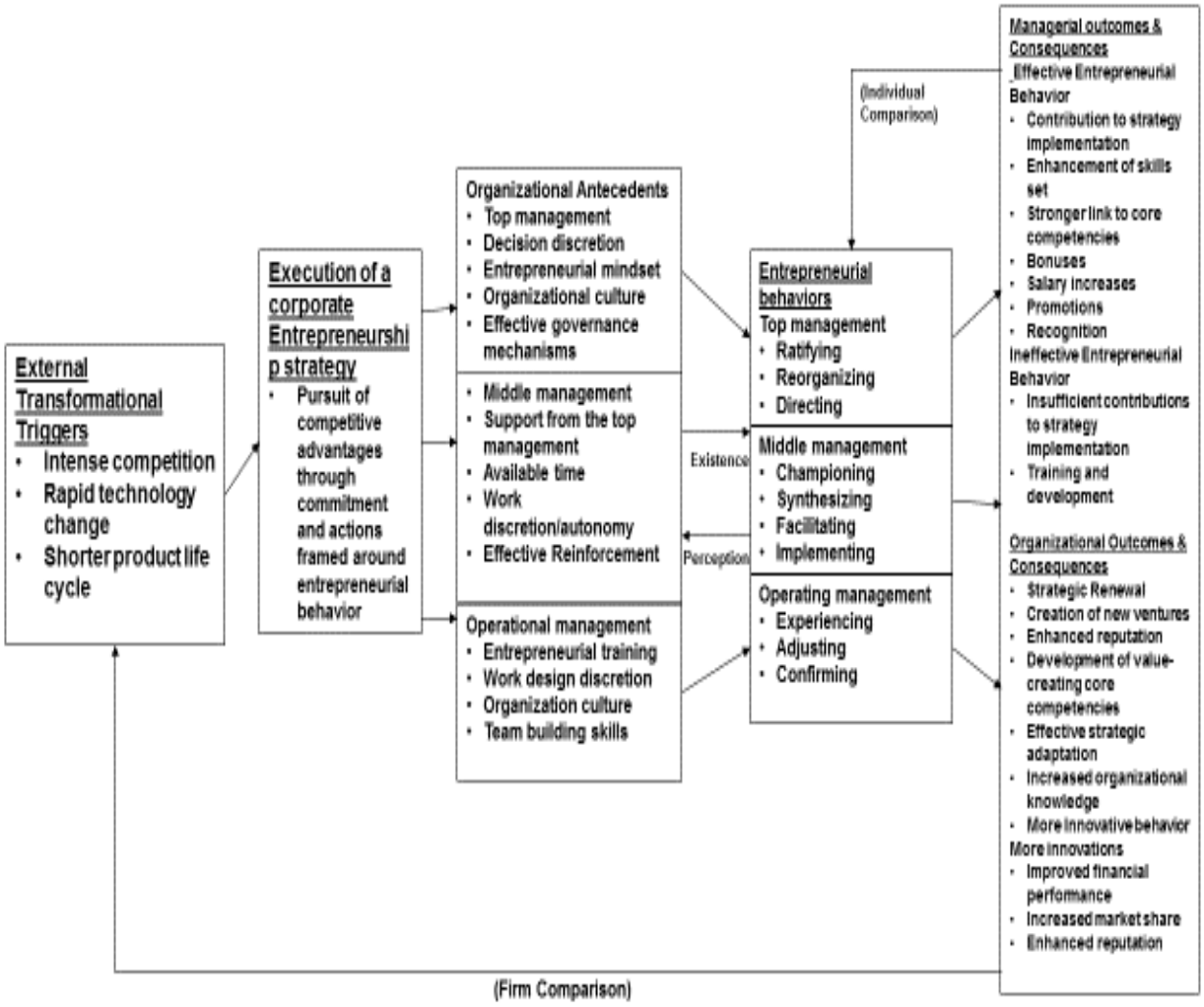


Figure 2.7: Model of the Corporate Entrepreneurship Process as it relates to Managers (Source: Kuratko, et al., 2004)

2.2.8.1 External Transformational Triggers

Changes in external environment that create significant and unexpected changes create an opportunity for a company, through creativity and innovation, to improve its performance. These changes act as triggers, requiring the firm to configure its resources and forces top managers to call for entrepreneurial actions as a response to these external environment changes. According to Tushman, Newman and Romanelli (1986), organisation reorientations are said to be triggered by performance crises which result in firms replacing managers who fail to adapt to changes. Thus managers who anticipate the changes in advance and act on them are said to be more successful at reorientations. They are encouraged to manage the misfits between the firm's strategy-structure

matches as they deal with these changes and help employees realign according to how they understand the changes enabling them to craft their own jobs (Lau & Woodman, 1995).

According to Baum, et al. (2001), precipitating the event's effect and the entrepreneurial behaviour depends on the interactions of managers and employees, as well as the organisation characteristics and developments in the external environment. In conclusion, managerial support is most forthcoming when the triggers are caused by a threat, rather than an opportunity and where the source of the trigger is coming from top management rather than bottom up. Therefore for entrepreneurship to be encouraged on an ongoing basis, managers are required to identify the key triggers and the course of action to be taken in response to precipitating events (Morris & Kuratko, 2002).

2.2.8.2 Corporate Entrepreneurship Strategy

Corporate Entrepreneurship strategy is defined as a set of undertakings and operations designed around entrepreneurial activities and innovation that is aimed at developing current and future competitive advantage which leads to competitive success (Kuratko, et al., 2004). An effective foundation of corporate entrepreneurship strategy requires all employees to demonstrate their entrepreneurial capabilities for a company's adaptation as a source of current and future market place success. In this case, there is a reliance on innovation as the foundation for the creation of new business or the configuration of existing ones, taking considerable and reasonable levels of risk (Miller & Friesen, 1982). However, success will be recorded only if awareness, nurturing and encouragement of entrepreneurial behaviour is done throughout the firm, with individuals weighing up the opportunity costs for engagement for commitment to be engendered (Shane & Venkataraman, 2000).

Organisational innovation and other strategic activities are said to surface as a result of either induced strategic behaviour, which capture formal entrepreneurial behaviour or autonomous strategic behaviour which is as a result of informal entrepreneurial behaviour. According to Burgelman (1983), induced strategic behaviour is driven from the top with the firm's strategy and

structure providing a platform to elicit and support entrepreneurial behaviour, with top management overseeing, nurturing and supporting entrepreneurial behaviour as the foundation for product, process and administrative innovations (Heller, 1999). On the other hand, autonomous strategic behaviour is a bottom up process whereby product champions pursue new ideas, through political process and develop and co-ordinate activities associated with innovation to achieve success.

2.2.8.3 Organisational Antecedents

Organisational antecedents of entrepreneurial behaviour are made up of five core primary dimensions of firm internal environment, which include appropriate use of reward systems aimed at encouraging entrepreneurial behaviour, managerial support, which is an indication of managers' willingness to facilitate and promote the required behaviour, resource availability, including time to engage in entrepreneurial activities, a supportive organisational culture and work discretion, including autonomy and risk taking (Kuratko, et al., (2004). Burgelman (1983) also pointed out that culture, strategy and structure were antecedents of autonomous strategic behaviour.

Hornsby, et al. (2002) pointed out the need for top level managers to provide middle managers with feedback in relation to the five antecedents above which will enable them to communicate effectively to junior/ operational managers. He further pointed out the importance of tacit knowledge about successful entrepreneurial behaviour which will give them an edge to surface as a competitive edge. Chen, Greene and Crick (1998) pointed out that when the value of entrepreneurial behaviour exceeds that of other behaviours then managers will champion, promote, integrate and implement entrepreneurial activities. Burgleman (1984) highlighted that top managerial decision to encourage risk taking and not to punish failure is a strong antecedent for autonomous strategic behaviour. Kuratko, et al. (2004) concluded that an internal environment that supports innovation will have strong antecedents of entrepreneurial behaviour.

2.2.8.4 Entrepreneurial Behaviour and Levels of Management

Management, especially top management, is considered to be critical and are the drivers of innovation through the facilitation and promotion of entrepreneurial behaviour, which includes the championing of innovative ideas and providing the required resources for entrepreneurial action. Organisations' innovative outcomes were positively linked to this support from top management (Kuratko, Hornsby & Covin, 2014). In trying to understand the different levels of influence of management on innovation, perceived internal antecedents as measured by CEAI and corporate entrepreneurship action as measured by the number of new ideas implemented will be assessed.

In their research, Hornsby, et al. (2009) found that there was a more positive relationship between managerial support and entrepreneurial action at senior and middle management than at first level managers. They further noted that senior managers are expected to ratify, recognize and direct, whilst middle managers are expected to endorse, refine, marshal entrepreneurial opportunities and identify, obtain, distribute resources required to chase after opportunities. Senior managers, according to Borins (2002), are expected to set clear goals that encourage innovation, consult with staff, set up incentive and innovation awards systems, minimise work constraints and give innovators' projects a fair chance to succeed by providing the necessary resources.

Quinn (1985) highlighted the role of middle management in that they foster communication about the company goals and priorities, they interact with diverse employees which gives them the opportunity to encourage innovation, thereby allowing them to take calculated risks. He also noted that they provided a communication channel to top management, which enables new ideas to be evaluated and considered as part of organisations overall strategies (Hornsby, et al., 2002). The critical role of middle managers to innovation was further emphasized by Nonaka and Takeuchi (1995) when they suggest that the central role managers play, gives them an opportunity to gather innovative ideas, both inside and outside the firm. Therefore the entrepreneurial behaviour expected of middle level managers is designed around their need to interpret newly formed strategies, then behave in a way that will harness other employees' effort to understand behaviour that is expected of them (King, Fowler & Zeithham,

2001).

Hornsby, et al. (2009) considered junior managers to play an experimenting role, in line with the competence definition sub-process, modifying roles which relate to the competence modification sub-process and confirmation roles which relate to the competence deploying sub-process. Thus, they focus more on deciding work priorities, work methods and resolving problems, whereas middle management is expected to propose entrepreneurial opportunities that might create new business for the organisation. However, previous researchers have acknowledged that, although entrepreneurial competences exist at different levels of management, the entrepreneurial ideas emanate from every level of management, especially at junior and middle management level, (Hornsby, et al., 2009). Noting comments from Phan, et al., (2009), it can be concluded that managers from different levels need to contribute to innovation based CE for it to be effective. However, they found that managerial support and work discretion and the outcomes of entrepreneurial action were more positive at senior and middle management.

2.2.8.5 Managerial – Level Outcomes and Consequences

Effective entrepreneurial behaviour is the ultimate result that signifies that behaviour to execute corporate entrepreneurship yielded required positive results. Thus, this is measured by the extent to which the behaviour contributed positively to implementation and the degree each manager's skill set was enhanced, the value derived by the organisation, as indicated by recognition and rewards awarded to the manager (Kuratko, et al., 2004). Assessment and measurement of performance, both subjectively and objectively, is critical as some results have long term commercial value of entrepreneurial behaviour which will make them difficult to assess only by an objective measure. They further emphasised that managers' entrepreneurial behaviour consequences are either intrinsic, which is psychological, or extrinsic, which is tangible.

2.2.8.6 Organisational – Level Outcomes and Consequences

Indications of the organisation misalignment with the economic environment are identified when changes in both internal and external environment

leads to pressure for change which decreases effectiveness. Thus performance outcomes are critical to provide feedback on effectiveness and efficiency of current strategies, or alternatively provide feedback on the firm‘s willingness or capacity to change to new strategies (Ginsberg, 1988). Financial outcomes, such as increase in sales, productivity, market share, reduced waste and labour efficiencies are a good indication of successful entrepreneurial actions. Behavioural criteria measures look at the number of new ideas suggested and implemented, and the amount of extra time spent over and above the normal work hours to pursue an idea (Hornsby, Kuratko & Montagno, 1999). Both organisational and individual outcomes are in sustaining corporate entrepreneurship, with individual outcomes being sustained when rewards received are valued and perceived to be linked directly to manager decision to be entrepreneurial and for the organisation when results exceed possible outcomes received from a different choice of strategy or behaviour (Kuratko, et al., 2004).

2.3 Towards a hypothesised model of CE in SOEs

This section deals with the formulation of hypotheses that were tested in assessing the level of entrepreneurship in SOEs in Zimbabwe and South Africa. Manager perception was used to test the relationship between management support, reward/reinforcement and work discretion with innovation. It was also important to assess whether this perception differs at different management levels. Innovation comes in different forms and the study looked at technology, organisational and human resources innovation. It was further tested by also looking at the number of new projects or changes that were implemented in 12 months. Thus management support, reward/reinforcement and work discretion were the independent variables and innovation the dependent variable, with education as our control variable. Occupational level was used as our moderating variable. Furthermore, a proposition was put in place to review and compare how organisational antecedents were fostered in South Africa and Zimbabwe. The model below (figure 2.8) illustrates the model that was tested in this study and each hypothesis and the literature linked to them is discussed individually. Both internal and external factors play an important role in fostering

corporate entrepreneurship and promotion of innovation. According to Barrett, Balloun and Weinstein (2012), business should focus on both internal organisational strategies to cultivate a creative culture, as well as external economic and competitive factors. The study, however, focused on internal factors as they give organisations a competitive edge and if properly fostered, create sustainability that is critical for innovation. According to Hornsby, et al. (2000), internal organisational factors are critical for cultivating entrepreneurial behaviour amongst managers, thereby encouraging innovation. They also further emphasised that internal factors, which are considered to be key antecedents of corporate entrepreneurship efforts, affect the internal environment which influences interest in and support for entrepreneurial initiatives in an organisation (Hornsby, et al., 2002).

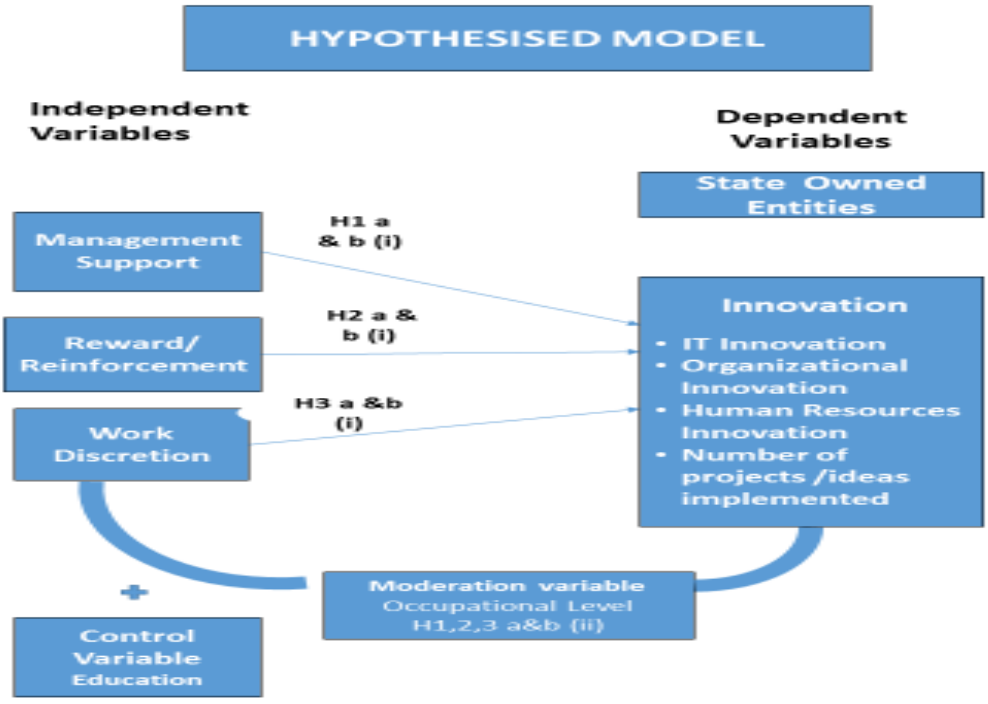


Figure 2.8: Hypothesis Model: Source: Research Proposal

2.3.1 Hypotheses

The research focuses on the following hypotheses:

- H1 (i): There is a positive relationship between managerial support and entrepreneurial action.
- H1 (ii): The relationship between management support and

innovation and number of projects implemented is moderated by occupational levels.

- H2 (i): There is a significant relationship between reward and reinforcement with staff‘s motivation to be innovative/involved in process innovation.
- H2 (ii): The relationship between reward/reinforcement and staff motivation to be innovative as well as number of projects implemented is moderated by occupational level.
- H3 (i): There is a significant relationship between work discretion and innovation amongst managers.
- H3 (ii): The relationship between work discretion and innovation and number of projects implemented is moderated by occupational level.
- H4: The level of innovation within South African state owned entities is different from that of Zimbabwean state owned entities.

2.3.2 Management support and entrepreneurial action

A number of studies have been conducted to assess the impact of management support in encouraging innovation in organisations, by motivating managers to be innovative and to sustain this motivation over a long period of time. According to Quinn (1995); Hisrich and Peters (1998); Pearce, et al. (1997), management support indicates the inclination of managers to support and encourage entrepreneurial behaviour in a company. Such support can include championing of creative ideas, provision of resources or know how or systemising entrepreneurial activity with organisation processes and systems. Corporate Entrepreneurship and the behaviour through which it is practised has emanated for a host of purposes including profitability, strategic renewal, innovativeness, gaining knowledge to develop future revenue streams, for international success and for effective configuration of resources to develop competitive advantages (Kuratko, Ireland & Hornsby, 2004). Regardless of the purpose of the CE endeavours, managerial behaviour is a major determinant of success, with creative and innovative managerial behaviour to be sustained throughout the organisation.

In an attempt to highlight the critical role management support play in CE, Sharma and Chrisman (1999, p. 18) purports that CE "is the process whereby an individual or a group of individuals, in association with an existing organisation, create a new organisation or instigate renewal or innovation within that organisation." This was also supported by other researchers who claim that CE represents entrepreneurial behaviour that has to be endorsed by the organisation, which commits resources for the purpose of value creating innovations. Therefore managers' entrepreneurial behaviour is critical to effect CE regardless of the primary reason it is being pursued, with the strategic role they play at all levels, calling for different action for the success of CE effort (Miller & Camp, 1986).

Many top managers in most innovative companies (e.g. Google, 3M, and Apple) today are seeking ways to figure out the challenges of sustaining an innovative environment in a world that is constantly changing (Kuratko, Hornsby & Covin, 2014). They further emphasised that corporate innovation is envisaged to facilitate firms' efforts to innovate continuously and effectively cope with competition. This requires them to move beyond traditional product and service innovation, but rather to focus on corporate entrepreneurship and innovation. Organisations' top management is required to demonstrate a strategic intention towards entrepreneurial activity to enable their firms to successfully compete in the competitive global market. They are therefore required to create an internal environment conducive to the conception and sustainment of innovation creating strategies (Kuratko, Hornsby & Covin, 2014). Credible innovation is more likely to occur when the environment where individuals' entrepreneurial potential is sought and nurtured, accompanied by sharing of organisational wide knowledge.

The role of top management/ senior managers is critical to the success of entrepreneurial activities and when a firm lacks the skills and competences at the top to drive change, then the success of any organisation is compromised. Therefore, they have to develop a general capacity for entrepreneurship, which can be done through their understanding and manipulation of the drivers of innovative activity which includes vision, organisational architecture and human

resources (Kuratko, Morris & Covin, 2008). Top management are tasked with six entrepreneurial imperatives, according to Covin and Slevin (2002), which are the nourishment of entrepreneurial capability, the protection of disruptive innovations, making opportunities make sense, questioning the dominant logic, challenging conventional strategic practices, revisiting the deceptively simple questions by identifying growth opportunities through re-asking basic questions which include an understanding of the business and what customers value and lastly, linking entrepreneurship to strategy.

The role that not only senior management play, but also middle management and junior management also started gaining relevancy with Hornsby, et al. (2009) conducting a study on different levels of management and their contribution to innovation when they found out that the relationship between perceived internal factors and number of new ideas implemented differed with managerial levels. The conclusion was that occupational levels moderated the behaviour between management support and innovation.

Studies from Hornsby, et al. (2009); Kuratko, et al. (2008) and Covin and Slevin (2002) provided the platform to build the hypotheses for this study to assess the impact of management support on innovation. Organisational management support was tested by assessing how it was fostered in organisations by testing firstly, whether there was a relationship between management support and innovation. This relationship was further tested by assessing the number of changes or new projects that were implemented by the managers who took the survey in the past 12 months. Furthermore, an assessment was done on whether management levels moderated the relationship between management support and innovation as per the finding from Hornsby, et al. (2008), where they concluded that this relationship was at its strongest at senior and middle management.

The questions that sought to be answered by the assessment were whether management support encouraged innovation and if it did, whether the ability to drive change in SOEs differed at different management levels. Management support hypotheses tested, therefore, were fourfold as illustrated below:

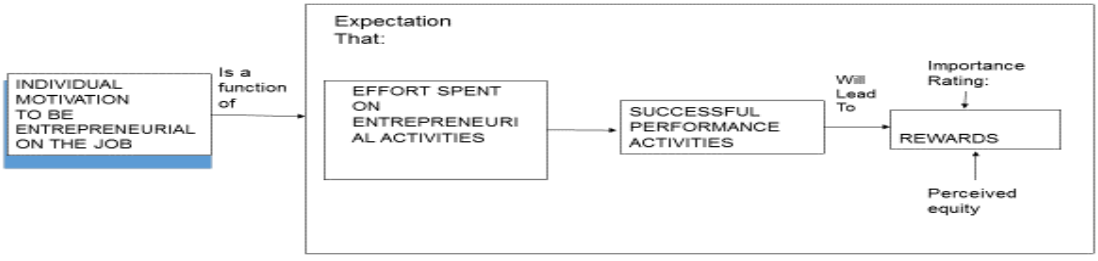
H1a (i). There is a positive relationship between management support and entrepreneurial action.
H1a (ii). The relationship between management support and entrepreneurial action is moderated by occupational/ management level.
H1b (i). There is a positive relationship between management support and number of projects implemented.
H1b (ii). The relationship between management support and number of projects implemented is moderated by occupational/management level.

2.3.3 Reward /reinforcement and innovation.

Rewards and reinforcement, according to Hornsby, et al. (2002) refers to “the extent to which one perceives that the organisation uses systems that reward based on entrepreneurial activity and success”. They further noted that reward has been found to have a positive influence on entrepreneurial outcomes. Morris and Kuratko (2002, p. 291) argued that it was important for managers to acknowledge innovative ideas brought forward by employees, and they should ensure that resources are provided and quickly facilitate the approval and implementation of such ideas. This is believed to foster innovation and encourage sustainable entrepreneurial behaviour. Reward and recognition has been seen to have a positive influence on employees to be innovative and risk taking.

It is critical for organisations to put in place reward systems that motivate employees to be entrepreneurial and in this regard, Block and Macmillan (1993) identified types of internal entrepreneurship behaviour, which include equity and equity equivalent, bonuses, salaries and promotions and recognition. However, key for any reward system to induce effective entrepreneurial behaviour is how the rewards are received and perceived in line with entrepreneurial behaviour. According to Porter and Lawler (1968), in their model of expectancy below in figure 2.9 below, posits that motivation is determined by how a person perceives the direction relation between the effort they put in and successful performance outcome during performance reviews or evaluation, how a person perceives good performance appraisal and achievement of rewards and finally whether the company is offering correct rewards.

They further emphasised that the linkages in the model is between employee effort and management evaluation of performance which require managers to be clear to employees as to what they view being entrepreneurial on the job entails, how performance for entrepreneurial activity will be evaluated, and the performance criteria is clear which will include innovation and risk taking in key performance areas and the review system is clear. The second linkage involves identifying reasons why employees might not see a relationship doing well in the review system and receiving of rewards which can be caused by managers not rewarding the behaviour they have asked for or when employees believe they will receive the reward, regardless of effort put in. The last linkage is when employees are unmotivated because management is offering the wrong rewards for entrepreneurial behaviour. The rewards might be too small for the effort put in or employees do not attach importance to the rewards being offered or they are perceived to be unfair compared with what other employees in the organisation or other organisations are being offered for the same effort.



Source : Kuratko, Morris & Covin (2008)

Figure 2.9: The Expectancy Model (Source: Porter & Lawler, 1968 in Kurtatko, Morris, & Covin, 2008).

Managers also respond differently to the receipt of rewards as pointed out by Huseman, Hatfield and Miles (1987), who identified three response types to perceived equity or inequity of such rewards and organisations needs to be aware of the different satisfaction levels of managers to encourage consistent entrepreneurial behaviour. The first type response is benevolent response

which is when the individual is satisfied with being under rewarded and will feel guilty when he/she is equitably rewarded or over rewarded. Secondly, the equity sensitive type where individuals perceives that everyone should be rewarded fairly, based on input and thirdly, the entitlement response type whereby the individual perceives that everything they receive is due to them.

Turning to the public sector, a question has to be asked is whether SOEs can apply and implement the reward systems as above that will encourage entrepreneurial activities. Innovation in the public sector is the property of government, with no ownership, with civil servant being paid fixed salaries and small bonuses compared to the private sector (Borins 2001). He pointed out that although the public sector traditionally does not give large financial rewards for innovation, awards such as gain sharing and royalties have been introduced, by the Canadian government to individuals and groups to encourage innovation. Other examples where innovation was rewarded was during the Clinton government, when Robert Reich who was the Secretary of Labour, took every opportunity to recognise staff initiatives, by establishing departmental innovation awards, giving civil servants the opportunity to meet with politicians and inviting civil servants whose ideas were incorporated into legislation to White House signing ceremonies. Although such incentives were not monetary, the recognition went a long way to encourage innovation (Borins 2001).

In exploring the role that managers at different levels play, Hornsby (2001) argued that middle managers played a more critical role in providing rewards that enable employees to experiment and explore the feasibility of innovative ideas. However rewards and reinforcement was perceived to have a more positive influence on lower level managers, as they are more risk averse and such rewards would help them to overcome their risk avoidance (Hornsby et al, 2009).

In assessing the managers' perception on the organisation's approach to reward system factors like promotions for people who are innovative, payment of additional rewards for championing new projects and recognition for risk takers, to name a few, formed part of the survey questions informed by the

previous studies. In terms of innovation, factors included questions on technology, organisational and human capital innovation. To enable the study to establish the actual changes / innovation projects, the respondents were requested to indicate the number of changes they had implemented.

Studies from Borins (2001); Huseman, Hatfield and Miles (1987); Hornsby, et al. (2009) as well as Kuratko, et al. (2008) informed the formulation of the hypothesis on reward/ reinforcement and innovation. Hornsby, et al. (2009) went further to illustrate the moderating effect of management levels to the relationship between reward and innovation, in which they proved it to be stronger at junior management level. The study then sought to test this conclusion in the context of SOEs in South Africa and Zimbabwe. In formulating the hypothesis for reward /reinforcement, research questions considered were whether reward/reinforcement plays a positive role in motivating staff to be innovative and whether the number of innovative ideas implemented increased as a result of perceived rewards at different management levels. The study sought to confirm or reject the hypothesis below:

H2a (i). There is a significant relationship between reward and reinforcement with staff‘s motivation to be innovative / involved in process innovation.
H2a (ii). The relationship between reward and reinforcement and staff‘s motivation to be innovative / involved in process of innovation is moderated by occupational level.
H2b (i). There is a positive relationship between Reward/ Reinforcement and number of projects implemented.
H2b (ii). The relationship between Reward/ Reinforcement and number of projects implemented is moderated by occupational level.

2.3.4 Impact of work discretion on innovation

In reviewing the role that work discretion plays in organisations to influence innovation, it was important to establish what work discretion entails and the literature available. Kuratko, Hornsby and Covin (2014) defined work discretion as the magnitude that one perceives the organisation to tolerate failure, provide decision making latitude, freedom from being supervised, level of

delegation and authority to lower level managers. Thus innovation is seen to take place when staff have more work discretion and are encouraged to engage in experiments. Work discretion is used by most managers when performing key tasks and this varies across managerial levels, with junior managers focusing on managing and instructing subordinates to perform tasks efficiently, with middle managers focusing on linking different level groups of employees and senior managers scanning the environment for opportunities and attention being focused on efficiency (Hornsby, et al., 2009). They concluded that senior and middle managers generate more innovation in the presence of work discretion than first level managers. In the public sector, excessive formal controls inhibit innovation, making civil servants less innovative. They further contended that managers at different levels perceive the viability and the appeal of organisational factors differently in promoting entrepreneurial action. However, the results of their study indicated that entrepreneurial activities in the form of implemented projects increased for senior and middle management with junior management not seeing the link between work discretion and their tasks.

The aim of this study was to test whether there was a significant relationship between work discretion and innovation. The impact of work discretion on innovation was tested by looking at six factors in our research instrument, which included some questions on whether managers were given space to make decisions without checking with their boss, whether they were provided with freedom to use their judgement and whether the organisation allowed them to make mistakes without harsh criticisms to name a few. In formulating the hypothesis, the research questions considered to establish whether staff would be motivated to be innovative and included whether work discretion plays a positive role in motivating staff to be innovative and whether the number of new ideas implemented increased with perceived work discretion at different management levels. The formulated hypotheses are illustrated below:

H3a (i). There is a significant relationship between work discretion and innovation.

H3a (ii). The relationship between Work Discretion and innovation is moderated by occupational level.

H3b (i). There is a relationship between Work Discretion and number of projects implemented.

H3b (ii). The relationship between Work Discretion and number of projects implemented is moderated by occupational level.

2.3.5 Level of innovation as a result of fostering of internal organisational antecedents in both Zimbabwe and South African State owned entities as perceived by managers in these organisations.

Since the research was based on SOEs in Zimbabwe and South Africa, consideration was taken to evaluate whether the perception of managers on how organisational factors were configured differed between the two countries. The purpose was not to test a hypothesis but to gather information and evaluate the differences and explore reasons why such differences occurred. Furthermore, the perception of managers at different levels was gathered and evaluated. The main aim was to assess if any learnings can be gathered from the feedback that can be used in another country as both countries are operating in the same region.

A review of the SOEs in both countries has been considered to gain an insight that can explain some of the results obtained from the study. The economic meltdown that has hit the world since 2008 has had a major effect on South Africa and Zimbabwe. South Africa is on the brink of recession with its credit rating being downgraded to triple B minus with a negative outlook by Standard and Poor, citing persistent electricity shortages and weak business confidence as its justification (ENCA, 2015) and with Zimbabwe having been in recession for a number of years. According to Zhou (2001), there has been a movement calling for the restructuring of old practices at a macro and micro level in state owned entities in response to market challenges faced by many economies in developing countries. It was noted that the public enterprise sectors were not making a significant contribution to the progress of economic development (Rammanadham, 1989). He further stated that SOEs have not been providing investible surplus to government, resulting in them requiring massive subsidisation, imposing a fiscal burden to the economies and becoming a drain on scarce state resources. Thus, this study seeks to investigate the level of

CE in both countries and to make recommendations based on the current literature on how these organisations can improve their performance once gaps are established from the results obtained.

In conclusion, SOEs in both countries have to adopt CE principals with special focus on innovation for them to remain relevant. Alberti and Bertucci (2006) urge that innovation is enabled by effective leadership, having a skilled workforce who have access to areas of their expertise, an organisational culture that holds employees accountable for performance and offers reward to encourage innovation, promotion of team work, breaking down barriers between gender, age, race and ethnic groups with innovation being oriented to achieving measurable progress. Based on the literature review above the hypothesis is therefore that:
H4: The level of innovation within South African state owned entities is different from that of Zimbabwean state owned entities.

The comparison of perceived internal organisational antecedents by managers in both Zimbabwe and South Africa’s state owned entities

2.4 Conclusion

Corporate Entrepreneurship in general, has been identified as critical for the revitalisation of innovation, creativity and leadership in corporations. CE is a risk and it has to start somewhere and it possesses the critical components needed for future productivity of organisations (Kuratko, et al., 2004). The critical role that corporate entrepreneurship play is summarised in the definitions provided by several researchers who view it as a process of organisational renewal (Sathe, 1989) with Sharma and Chrisman (1999) suggesting that it is a process where an individual or a group of individuals in an organisation create new organisations, instigate renewal or innovation within that organisation. However, it was pointed out that the success of entrepreneurial activity is dependent on how entrepreneurial behaviour is sanctioned with organisations and resources committed for the purpose of developing value creating innovations. The role played by managers at all levels and the organisational antecedents and how they are configured has been recognised to be key for the success of CE in

organisations.

Innovation in the public sector requires senior managers and politicians to create an environment which is conducive for CE. Managerial support, work discretion and reward and recognition have been positively linked with positive innovation outcomes. Middle managers have been identified to initiate innovation more than first line managers, with them being involved in 75% of the innovation in the Commonwealth sample used in the research by Borins (2002). Resource availability for innovation, demanding work schedules that leave little time for innovation, conflict amongst groups, have been identified as obstacles to innovation for managers. In the public sector, on the other hand, public scrutiny, lack of rewards or incentive for innovation, lack of resources, have been identified as the main obstacles to innovation.

Innovation and the application of corporate entrepreneurship has been recognised as a possibility in the public sector, a review of such activities which involved the restructuring and reorganisation of State Owned Entities in both South Africa and Zimbabwe has revealed that the measures implemented has not been effective as the current results reflect organisations that are continuously relying on government bail-outs, causing a drain to the economy, maladministration and corruption. However, the question which forms the basis of this research is whether there are enough organisational factors fostering corporate entrepreneurship in state owned entities in South Africa and Zimbabwe.

The following chapters look at the research methods employed as well as the results of the surveys conducted in six SOEs in Zimbabwe and South Africa. The results are analysed in line with the literature review conducted in this chapter.

3 CHAPTER: RESEARCH METHODOLOGY

3.1 Introduction

The following chapter provides an outline of the approach used to conduct this research. A quantitative research framework was considered which included the use of quantitative analysis, descriptive research methods, deductive reasoning and analytical research**.** Using the CEAI measuring instrument that had 40 items derived from three critical organisational dimensions, namely management support, reward/reinforcement and work discretion, survey questionnaires or the link to qualtrics, which is an on-line data portal, was emailed to 400 managers in both Zimbabwean and South African SOEs. The research instrument was tested for validity by considering both internal and external validity and for reliability and the details are provided below. Multiple regression and Pearson coefficient was used to interpret the data.

3.2 Research approach

There are two common methodologies for conducting a research; namely qualitative and quantitative. Quantitative research has to do with the gathering of data, which allows for information to be quantified and subjected to statistical treatment in order to support or refute “alternate knowledge claims” (Creswell, 2003, pg. 153). This data collection is mostly numeric and mathematical models are used as the method of data analysis. Qualitative research, on the other hand, is not concerned with quantification of data. This study used a quantitative methodology in order to gather the most appropriate data to answer the research questions. Quantitative analysis was considered for this study as it has the ability to test hypotheses developed from theory and test them on observation or on collected data from samples which allows the confirmation of the research theory. Hornsby, et al. (2002), in their study of middle managers’ perception of the internal environment for corporate entrepreneurship which found positive relationship between organisational factors and innovation and Linyiru, et al. (2015) on the study of influence of corporate entrepreneurship on performance of state corporations in Kenya use quantitative methodology which confirmed that CE increased efficiency of doing business.

3.3 Research Design

Cross sectional survey research methodology was adopted as it is best suited for quantitative research. This study was directed by way of survey in a questionnaire format. The research study was exploratory, since there are studies to which orientations can be made for evidence. Previous research used questionnaires in calculating the variables (Zellweger, Sieger, & Halter, 2011; Chen, Gully, & Eden, 2001) and the same approach has been used in this study. The advantages of using quantitative research, especially surveys, as primary data collection is its versatility. A survey that uses email or internet as the medium for communication can cover a wide geographic area at a fraction of the cost and time that face to face methods will incur (Cooper & Schindler, 2014).

Cooper and Schindler (2014) further highlighted the advantages of administering surveys via email or internet as that it requires minimum staff to administer, is perceived to be anonymous, data can be collected rapidly and it is convenient for people who are computer literate. However, surveys administered electronically also have their own challenges which include low response rates, no interviewer intervention to allow for probing, need for accurate mailing list as well as a need for reliable internet and email access.

3.4 Population and Sampling

3.4.1 Population

The population in this study is the managers in six public entities, three from Zimbabwe and three from South Africa. Based on the National Treasury report (April, 2015), South African had 291 SOEs listed in the Public Financial Management Act (PFMA) falling in schedule 1 to 3D. However, the three entities selected for this study were selected from schedule 2 and 3 national entities totalling 175. According to the Commission for Employment Equity annual report (2014-2015) South African SOEs had a total managerial headcount of 27 552. IDC had about 627 employees at managerial,

professional and executive management, Social Housing Regulations had 20 and AEEB had 24 managers according to information provided by the HR departments.

Zimbabwe, as of 15th February, 2015, was reported by Zimbabwe Independent paper to have 97 SOEs. National Social Security employed 830 staff of which 180 were at managerial level, Zimbabwe Electricity Transmission and Distribution Company (ZETDC) was reported by its HR department to employ 850 staff of which about 210 were managers and NetOne employed 2 374 employees and 600 managers as reported by the HR department. However, the number might have reduced as the organisation was undergoing restructuring.

A comprehensive list of different SOEs under consideration is provide under sections 3.4.1.1 to 3.4.1.6 below.

3.4.2 Demographics of the Companies

3.4.2.1 Social Housing Regulatory Authority (SHRA)

Background

The Social Housing Regulatory Authority (SHRA) is a schedule 3A entity that was established in August 2010 by the Minister of Human Settlements. It was set up to address the shortages of housing amongst the poor. Its core function is to regulate, approve, administer and disburse both institutional investment and capital grants to social housing institutions responsible for providing affordable housing. At the time of the administration of the tool, the unit was headed by an acting CEO and the area was under administration, due to poor performance and mismanagement of funds by the former CEO. According to the parliamentary group report (September 2014), the maladministration was discovered on how funds was disbursed to provisional special projects in the provinces. The absence of a permanent CEO played a role in the creation of uncertainty which could have impacted on the responses received. The demographics of SHRA are listed in table 3.1 below.

Demographics of SHRA

Table 3.1: Profile of Responses

Managerial Levels	No of surveys sent	No of responses received
Senior Management/ Executives	10	10
Middle Management	8	5
Junior Management	7	5
Total	25	20

Sources: Survey Profile responses 2015

The SHRA's total headcount was 25, with the Chief Executive Officer (CEO) reporting to the Council/ Board. The questionnaire was sent via email to all 25 staff members with the aim of getting at least 20 responses. The target response was achieved as there was a willingness from staff to share their perception due to the turbulences in the area and they were hoping that if the information is shared with the Board it might help to bring about the necessary changes to move the organisation forward. There was a preference for the responses to be via emails. This made it easy to follow up, therefore, the reason why the response rate was high. Of the five staff members who did not respond, two were administration staff who were on a managerial level and the three middle managers were specialists.

3.4.2.2 Industrial Development Corporation (IDC) - South Africa

Background

According to the Industrial Development Corporation Act, No 22 of 1940, the corporation was formed in 1940 to spearhead the development of domestic industrial capacity, especially in light of shortages of manufactured goods experienced as a result of the disruption of trade between Europe and South Africa during World War II. Its mandate was expanded to include the promotion of economic empowerment of historically disadvantaged communities and persons, to foster the development of small and medium enterprises and co-

operatives, to leverage foreign direct investment in South Africa and the Southern African region and the rest of Africa through the use of its international network and the establishment and growth of new technology based firms (Industral Development Corporation, 2015).

According to Mantshantasha, of the Financial Mail (December 3-9, 2015), IDC has played a critical role since its establishment including, assisting in the establishment of Sasol in 1950, the sustaining of Iscor and ArcelorMittal SA, the funding of black economic empowerment (BEE) and the funding of the black participation in the MTN Group in 1993, to name a few. Judging from its successes, IDC is the only funding institution of significance in the hands of government. It has 850 employees made up of specialists, professionals and administrators with expertise in various specialised areas. The survey was conducted to get a perception from the managerial team as to the role they believe innovation or corporate entrepreneurship has played in driving its success. Although the questionnaire was sent out to 100 managers who were randomly selected, only 33 responded. The demographics for IDC are illustrated below in table 3.2.

Demographic of IDC

Table 3.2: Profile of Responses

Managerial Levels	**No of surveys sent**	**No of responses received**
Senior Management/ Executives	20	5
Middle Management	50	13
Junior Management	30	15
Total	100	33

Sources: Survey Profile responses 2015

Participants were invited to participate in the survey via qualtrics survey tool. The responses were very slow with a number of participants only answering the initial five questions and abandoning the rest of the survey. It was also

difficult to follow up as the system did not provide information on who responded and only an IP address was provided. When a letter to request for permission to conduct the survey was sent to the HR departments, they responded by requesting the researcher to send out the survey and those who were interested were to respond in their personal capacity. When responses were not forthcoming, manual questionnaires were printed and handed to managers at various levels.

The responses were more forthcoming as it was easy to follow up and request the completed forms. The rate of missing information was low on the manual responses. On line responses improved when some heads of departments requested their managers to complete the survey. The main reason for the low return was due to survey fatigue as they had been receiving a lot of survey requests from students. Pressure of work and time was also given as another reason for low responses.

3.4.2.3 The National Social Security Authority (NSSA) Zimbabwe

Background

According to the NSSA website, the National Social Security Authority (NSSA) was established by an act of Parliament, the National Social Security Act of 1989, as the statutory corporate body tasked by the Government to provide social security for all workers in Zimbabwe. Its main function is to promote occupational safety and health for all members through responsive schemes and services. At the moment, NSSA is administering two schemes i.e. Pension & Other Benefits Scheme and Accident Prevention & Workers' Compensation Scheme. In an endeavour to provide a more comprehensive social security package for the Zimbabwean society, groundwork for the introduction of more schemes is underway.

According to the NSSA annual report (2013), NSSA has recorded some notable achievements in community development projects such as hospital refurbishments, as well as commercial centers. These projects are aimed at creating business and employment opportunities for the local people to improve their livelihood. However, due to the economic downturn in Zimbabwe, The Authority is faced with challenges of companies closing down and

retrenchments, which is likely to affect the contributions received and benefits payable. The report estimated that 75 companies had closed down leaving 9 000 workers retrenched in that year alone. In order to alleviate the problem, the NSSA has taken the initiative to support industry by providing affordable funds through banks. One of the Authority's subsidiaries is a bank called Capital Bank.

According to the Financial Gazette of 19 October 2015, NSSA recently embarked on a restructuring exercise which resulted in the General Manager and other executives being relieved of their duties, due to suspected bad investment decisions. The organization will soon be embarking on a restructuring programme. NSSA's demographics are shown in table 3.3 below.

Demographics of NSSA

Table 3.3: Profile of Responses

Managerial Levels	**No of surveys sent**	**No of responses received**
Senior Management/ Executives	20	13
Middle Management	50	18
Junior Management	30	30
Total	100	61

Sources: Survey Profile responses 2015

According to the Act, NSSA is managed by a tripartite Board constituting equal representation from Government, employer representatives (EMCOZ) and employees' representatives (ZCTU and ZFTU). The administration is headed by the General Manager. Under him are six Directors for operational divisions and a total number of employees of about 830. Its operations are in all the regions throughout the country.

100 questionnaires were sent out to managers at all levels in various regions with a target response of 50. A Total of 61 responses were received. Response feedback was provided via qualtrics but due to electricity problems which

affected internet connectivity, manual surveys were sent out as back up. This helped as most of the manual questionnaires were completed. The survey was approved by the General Manager before he was relieved of his duties which then contributed to the high responses. The Director for HR was also keen on the survey as the information could be used, together with the 360 surveys that were conducted for Management development in 2014. Innovation was highlighted as an area of underachievement in the 360 surveys, so the insights from this survey would help the organisation to identify areas of improvement as well as input into their restructuring programme. The low response with middle management was due to the fact that they were based in the regions where electricity supply was worse which made the emailing of completed surveys a challenge. The imminent restructuring also had an impact on the responses as some managers were afraid to be victimised if anonymity was not kept.

3.4.2.4 The Zimbabwe Electricity Transmission and Distribution Company (ZETDC)

Background

According to the ZETDC annual report (2014/15), ZETDC is a subsidiary of the Zimbabwe Electricity Supply Authority Holdings which is a State Owned Enterprise whose task is to generate, transmit, and distribute electricity in Zimbabwe. ZETDC was established in 2008 under the Electricity Act of 1985 as amended in 2003.

The organization is faced with challenges of insufficient funding which is compromising the quality of the services offered by the organisation. According to The Southern Eye (1 October 2014), it was reported that ZETDC entered into a purchasing agreement with China-Africa Sunlight Energy for electricity that will be generated from the company's proposed $2, 1 billion energy project in Gwayi. That could perhaps boost the cash resources of the organisation for a more efficient service to the country which is currently experiencing a short supply. The company has also been in the process of implementing a metering technology for domestic users and small institutions from post-paid meters to pre-paid meters since 2014, which brings relief to consumers who were constantly experiencing billing problems.

However, according to the Financial Gazette (20 March 2014), there was a scandal involved in the project as the design engineers omitted a tamper switch and an accelerated life testing device as part of the specifications to guard against the loss of revenue resulting from meter tampering which led the organisation to lose millions of dollars in potential revenue as a number of households were reported to have tampered with the switch and are using the electricity for free. This caused a challenge to the electricity holding company that is faced with a huge debt and is struggling to stay afloat. The company's demographics are listed below in table 3.4.

Demographics of ZETDC

Table 3.4: Profile of Responses

Managerial Levels	**No of surveys sent**	**No of responses received**
Senior Management/ Executives	20	5
Middle Management	50	3
Junior Management	30	5
Total	100	13

Sources: Survey Profile responses 2015

ZETDC has at least 850 employees based at the head office in Harare and in the regions. A total of 100 questionnaires were emailed and only 13 responses were received. ZETDC lost a number of its well qualified staff from 2006 and during its restructuring phase. The Board is made up of mostly political appointees. Despite the fact that this research was approved by the Managing Director and the HR Director was requested to co-ordinate, the responses were very poor. The HR Director only agreed to distribute the survey to the department heads hoping they would then distribute it further to their managers. Only a few senior managers completed the survey but most did not and they also failed to distribute to their managers. Attempts to follow up with the HR

Director proved to be a challenge as he was always unavailable.

3.4.2.5 The Estate Agency Affairs Board (EAAB), South Africa

According to the Estate Agency Affairs Board (EAAB) website, EAAB was established in 1976 in terms of the Estate Agency Affairs Act 112 of 1976, with the mandate to regulate and control certain activities of estate agents in the public interest. Reporting to the Department of Human Settlements, the EAAB regulates the estate agency profession through ensuring that all persons carrying out the activities of an estate agent as a service to the public are registered with the EAAB. In 2011 News 24 (4th September), Kloppers reported the worst case of alleged maladministration and final abuse by the former CEO, resulting in her contract being terminated. The EAAB has steadfastly focused on improving its operational environment by using technology and technological innovations more effectively in its service offering to estate agents and stakeholders (The Board 2016).

Demographics of EAAB

Table 3.5: Profile of Responses

Managerial Levels	**No of surveys sent**	**No of responses received**
Senior Management	7	4
Middle Management	10	7
Junior Management	3	2
Total	20	13

Sources: Survey Profile responses 2015

EAAB has a staff complement of about 73 with 24 managers. The questionnaires were sent to 20 managers and 13 responses were received back. There were more responses received via qualtrics than manual. There was a slow response as managers were complaining that since it was towards year end they were too busy to complete the surveys.

3.4.2.6 NetOne – Zimbabwe

Background

NetOne is a private company wholly owned by the Zimbabwe government that was formed as a subsidiary of the Posts and Telecommunications Corporation (PTC) in 1996. According to the NetOne website, It is the first cellular network operator in Zimbabwe based on the Global System for Mobile Communications (GSM). Its main purpose was to introduce and offer mobile cellular telecommunications to complement the fixed line telecommunication services offered by PTC. Since then, service has been extended to all cities, towns, tourist resorts, mining, farming and rural areas. The network, which was launched with five hundred lines, has since expanded to an aggregate customer base of more than a million subscribers.

The mobile network company which is now in competition with two other mobile network private companies, namely Econet and Telecel, is constantly on a major drive for improvement and expansion. However, NetOne is not expanding as fast as its competitors due to financial constraints and according to The Source (23 June 2014), NetOne's market share has dropped to about 18% from near dominance at its inception. In order to remain competitive and offer good quality service, it needs to set up about 2,300 new base stations which cannot easily be done due to limited financing from its shareholder, the government.

Demographics of NetOne

Table 3.6: Profile of Responses

Managerial Levels	**No of surveys sent**	**No of responses received**
Senior Management/ Executives	25	14

Middle Management	15	7
Junior Management	15	5
Total	55	26

Sources: Survey Profile responses 2015

The company employs about 2 374 employees. It recently went through restructuring which resulted with 24 top executive positions being advertised with a new team coming on board. A total of 55 questionnaires were emailed to the organisation and 26 completed questionnaires were received. The response rate at senior level was greater as the new team was more willing to participate in the survey. More manual surveys ended up being administered as internet problems caused by load shedding caused some of the information already completed to be lost.

3.5 Sample and sampling method

According to LoBiondo-wood and Haber (1998, p. 250) a sample is a portion or a subcategory of the research population selected to participate in a study, representing the research population. With reference to this study, Human Resources departments for the profiled organisations were approached for a list of managers from all levels that could participate in the survey. In all cases, the HR department volunteered to send out the questionnaires to managers who were randomly selected as past experience had shown that employees responds better if surveys are send from HR departments than from a student. In the case of SHRA, questionnaires were sent out to 25 out of 25 employees with 20 responding, which was 100% of the management population. In IDC, HR department randomly selected 100 managers spread across all divisions in the organisation to ensure representation across the organisation, whereas NSSA provided a list of 200 managers in their organisation of which the researcher randomly selected 100 managers. However the actual emailing to the selected managers was done by the HR department. The selection for ZETDC of respondents was done by the HR department who emailed the survey to all its department heads and to 60 % of their middle managers and 40% of junior managers. The responses from this organisation were very poor with only 13 responses received from 100 respondents sampled. AEEB has

24 managers and the list was provided to the researcher who randomly selected 20 managers to survey, thereby covering over 90% of management population. Finally, Netone respondents were randomly selected by the HR department after agreeing with the researcher on criteria for the random selection.

In this case, the researcher was not confident of the entire population representation as managers were given an option to participate or not and some did not, as evidenced by a number of uncompleted questionnaires and the low response. Therefore the exercise was not mandatory. The managers who participated were familiar with the topic and had been exposed to the three independent variables under study and have been exposed to change or innovation. Therefore the managers were the sample frame and the SOEs were the sample parameter of this study. However, the sample size was limited to three SOEs from each country with a total of 400 managers being randomly selected.

With sampling, there is greater speed of data collection as the speed of execution reduces time between recognition of need of information and information availability (Cooper & Schindler, 2014). However, a sample is as good as it is representative of the characteristics of the population it purports to represent. The sample has to be valid, accurate and precise.

3.6 Research Instrument

The Corporate Entrepreneurship Assessment Instrument (CEAI) questionnaire (see Attached Appendix A) which comprises 40 items was administered personally by the researcher to the managers of the selected public entities. Likert scale type of questionnaire, which comprises five points with 1 representing strongly agree and 5 strongly disagree was used. A questionnaire was used to obtain relevant data to test the four identified hypotheses. Of the 40

items / factors on the instrument, the first nine dealt with demographic information, ten had factors related to management support, seven related to reward/ reinforcement, ten to work discretion, six to types of innovation and one to number of projects/ideas implemented.

The CEAI was merged for measure of constructs related to corporate entrepreneurship variables. CEAI, according to Kuratko, Hornsby and Covin (2014) measures the degree of individual perception about the organisation's conduciveness for individual entrepreneurial activity. They maintain that the instrument is psychometrically sound in accessing areas that need attention and improvement. It can also be used to develop a profile of a firm, with low scores indicating a need to develop activities to enhance entrepreneurship. The instrument was also used in previous studies done by Hornsby, et al. (1999) on the study on entrepreneurial climate in US and Canadian companies which was administered to managers. They only considered items which had factor load of 0.40 and above. Other studies included those by Hornsby, et al., 2002; Kuratko, et al., 2005; Goodale, et al., 2011.

3.7 Procedure for data collection

The questionnaires were send out to 400 managers by email prompting them to respond to the survey via qualtrics, email or print and manually complete and hand them back to HR department. Printed survey questionnaires were completed manually as the respondents were struggling with internet connections. The completed surveys were then collected by the researcher from the HR department. The intention was to receive a minimum of 165 back. The managers were given a month to complete the questionnaire. A consent form was attached to explain the purpose of the study. To confirm the reliability and validity of the tool to the target group, a pilot was conducted on an SOE organisation in SA.

3.8 Procedure for data analysis and interpretation

Data analysis can be defined as a process of systematically applying statistical

and logical techniques to describe, summarise and compare data (Ghauri & Gronhaug, 2010). When raw information had been cleaned and transferred to excel software it was analysed statistically using SAS statistical programme. The software was used to examine reliability and validity of the instrument and was further used to establish the correlations, means and standard deviations of the variables.

Multiple regression and Pearson correlation coefficient were used to interpret the raw data and provide meaning to it. According to Higgins (2005), multiple regression analysis allows you to examine how multiple independent variables are related to a dependent variable. Once the relationship on how multiple variables relate to the dependent variable is identified, the information on independent variables is then used to make much more powerful and accurate predictions about why things are the way they are. Hierarchical multiple regression was used to examine the relationships between the management support, reward /reinforcement and work discretion and innovation which was the dependent variable, and education was used as the control variable. A moderation model was used in the study to examine whether occupational level moderates the relationship between organisational factors and innovation. Moderator variables are often used to examine when an independent variable influences a dependent variable. Moderated models are used to identify factors that change the relationship between independent and dependent variables.

The Business Intelligence glossary (2015) indicates that correlation is a statistical measure that indicates the extent to which two or more variables fluctuate together. Pearson's correlation analysis is a measure of the strength of a relationship between two variables. According to Cohen (1988), Pearson's correlation coefficients is said to be weak if between 0 and 0.29, moderate if between 0.3 and 0.49, and strong if between 0.5 and 1. The sign of the correlation coefficient shows the direction of the relationship. A positive correlation means that as one variable is increasing the other variable will also be increasing and a negative correlation coefficient implies that one variable increases as the other one decreases. The Pearson's correlation coefficient was used to assess the relationship between the different constructs.

3.9 Limitations of the Research

The cross-sectional strategy precludes us from learning causal associations amongst variables. It may take considerable time for the effects of entrepreneurship to materialise (Lumpkin, Gregory & Dess, 1996). It is suggested that longitudinal designs are needed in configurational studies (Wiklund & Shepherd, 2003), however this was not possible due to the limited timelines for this study. A longitudinal investigation (measuring organisational factors at one point, and then innovation at some point later) would afford additional understandings into how organisational factors influence innovation and ultimately organisation performance. The study was based on self-report data incurring the possibility of common method bias. However, respondents were provided with anonymity and sensitive data was not requested. Upcoming research might use objective measures for firm performance to strengthen the study design.

Managers at junior, middle and senior management levels completed the survey. However, the survey was only limited to three SOEs in SA and Zimbabwe respectively, which does not represent the whole population. This means the results cannot be generalised. Future research should consider a broader range of managers and focus on one country at a time. Due to the political sensitivity and the current retrenchments in Zimbabwe, managers were not willing to respond to the questionnaire fearing that the results could be used to target for retrenchments. Results coming out of Zimbabwe might also be impacted by the current economic meltdown. However, since such challenges are the ones which encourage CE for companies to stay afloat, it is hoped the results will be significant.

The response rate was initially very low when the survey was administered and managers only started responding to the online surveys when prompted a number of times.

3.10 Validity and Reliability of Research Design

3.10.1 External validity

Cooper and Schinder (2008) alluded that external validity has to do with the data's ability to be generalised transversely across individuals, time and settings. The researcher attempted to achieve external validity by sampling respondents from various public entities operating in South Africa and others in Zimbabwe.

3.10.2 Internal validity

The research should ensure that the instrument used measures what it is set to measure to enhance internal validity. The final questionnaire was made up of 33 easy to understand questions without the demographic questions that would allow the respondents to answer all of them honestly without experiencing survey fatigue that is often associated with long questionnaires that are time consuming. Therefore, it did not have a negative influence on the responses.

3.10.3 Reliability

Reliability tests regulate the accuracy and exactness of the dimension technique (Cooper & Schindler, 2008). Steadiness of the dimension gauge was adopted to determine reliability. Cronbach's Alpha was designed using SAS to regulate and measure the gradation to which the tool items are standardised and reproduce same fundamental paradigms (Cooper & Schindler, 2008). Cronbach's alpha was used to assess the internal consistency (reliability) of all multiple item scales. Internal consistency describes the extent to which all the items in a multiple item scale measure the same concept or construct. The value of the Cronbach's Alpha ranges from zero to one and the closer the Cronbach's alpha coefficient is to 1, the greater the internal consistency of the items in the scale.

A pilot study was conducted to test the reliability of the instrument and the process and results are highlighted below. Further testing was also done where the actual study was conducted and reliability and validity results are further discussed in Chapter 4, indicating the Cronbach Alpha obtained.

3.10.4 Pilot Study reliability and validity testing

A pilot study was conducted with 15 respondents from the SHRA, 53% male and 47% female. The reliability for the Management scale, Reward/ Reinforcement, Work discretion and Innovation was conducted using Cronbach's Alpha and validity was assessed using exploratory factor analysis. The instrument initially had 52 questions which were reduced to 33 after reliability and validity testing. The Cronbach's Alpha score are presented below which informed the variables to be adopted as valid and reliable for the final instrument.

Table 3.7: Reliability and Validity Test for the Constructs for Pilot study

Construct	Sub-Construct		Validity			Reliability
		Item	Factor 1	Factor2	Factor 3	Cronbach's Alpha
Management support for Corporate Entrepreneurship	MSF1	In my organization, developing one's own ideas is encouraged for the improvement of the corporation	.916	.102		0.895
		Many of the Top Managers are known for their experience with innovative processes.	.879			
		My organization is quick to use improved methods that are developed by workers	.837	.355		
		My organization is quick to use improved methods	.825	.144		
		The term "risk taker" is considered a positive attribute for people in my work area	.720	.179		
	MSF2	Individuals with successful innovative projects receive additional rewards…….		.966		0.865
		My manager would tell his/her boss if my work was outstanding	.167	.871		
		Individual risk takers are often recognized for their willingness to champion…	.223	.803		
Reward/ Reinforcement	RR	My manager helps me get my work done by removing obstacles and roadblocks	.920			0.866
		My knowledge & skills can enable me to be more proactive in new project development	.867			
		There is a lot of challenge in my job	.866			

		This organization provides the chance to do something that makes	.777			
		I have the freedom to decide what I do on my job	.663			
		I feel that I am my own boss and do not have to double check	.663			
Work Discretion	WDF1	Managers in the organisation strongly believes in delegating decision making responsibility	.942			0.820
		The organization provides the freedom to use my own judgement	.790	.115		
		There is considerable desire among people in the organization for generation of new ideas without regard for cross departmental or functional boundaries	.762	.331	-.115	
		I have much autonomy on my job and am left on my own to do my own work	.706	-.332		
	WDF2	Harsh criticism and punishment result from mistakes made on the	.139	.874		0.728
		I seldom have to follow the same work methods or steps for doing my	-.173	.754	.563	
		My work load allows me time to work other innovative projects		.709	-.257	
	WDF3	Our Managers creates an environment that encourages innovation	-.134	-.215	.876	0.605
		Our organisation has implement new technology to improve processes	.377		.667	
		Our managers encourage employees to develop new competencies	-.120	.103	.646	
Innovation	IF1	A Our organisation applies IT to improve employee effectiveness	.899			0.861
		Our organisation devises different incentive systems to encourage employee innovation	.849			
		Our organisation regularly researches and develops new products and services	.795	.414		
		In my organization, developing one's own ideas is encouraged for the improvement of the corporation	.738	.348		
	IF2	Many of the Top Managers are known for their experience with innovative processes.		.873		0.607
		My organization is quick to use improved methods that are developed by workers	.207	.800		

Six constructs from Management support, four from Reward/Reinforcement and four from Innovation were removed. For the section known as Work Discretion, all the attributes were removed. All removed variables had a coefficient of less than 0.4. The anti-imagery scores for the removed construction are listed below

Table 3.8: Removed Variables

Management support	**Anti-image Correlation**
Money is often available to get new project ideas off the ground	.053[a]
There are several options within the organization for individuals to get financial support for their innovative projects and ideas	.204[a]
My organisation gives its employees the opportunity to use their creative skills to respond to market changes.	.264[a]
In my organisation senior management take the lead in developing new ideas	.294[a]
Senior management encourage innovators to bend rules and rigid procedures in order to keep promising ideas on track	.398[a]
The "doers on projects" are allowed to make decisions without going through elaborate justification and approvals procedures	.297[a]
Reward/ Reinforcement	**Anti-image Correlation**
My supervisor will increase my job responsibilities if I am performing well in my job	.066[a]
This company does a good job of balancing incentives for individuals initiative with incentive for team collaboration	.205[a]
My experience gained during the period of employment contributes significantly to new ideas and new products	.370[a]

A promotion usually follows from the development of new and innovative ideas	.383[a]
Innovation	Anti-image Correlation
Our organisation has developed a participatory working environment for the benefit of employees	.271[a]
Our organisation has a high level of cooperation between individuals and the organization	.349[a]
Our organisation responses quickly to changes	.346[a]
Our employees generally contribute innovative ideas and obtain good awards or prizes	.346[a]

3.11 Ethical Considerations

According to Cooper and Schindler (2008), ethics are defined as the norms of conduct that distinguish between what is right or wrong. They further emphasised that the main purpose of ethics in research is to ensure that no one is harmed or is adversely affected by research activities. Ethical norms in research help to promote knowledge, truth and ensure that errors are avoided, promote values such as trust, accountability, mutual respect, and fairness and ensure that researchers are held accountable (Cooper & Schindler, 2008). They further indicated that lapses in ethics in research can significantly harm the public, students, animal subjects and humans.

To ensure that the study was conducted in an ethical manner a letter (Appendix A) either on line or via email was attached to the research instrument indicating the purpose on the research and the use and how individual confidentiality was going to be protected. An assurance was also given that the data collected would be kept at a secure place and that it was only to be used for the purpose of the research. Individuals were also given the option not to participate or

stop participation at any given time during the completion of the questionnaire. They were also given contact details of the researcher and the research supervisor in the event that they felt discomfort with the process. Permission was sought from the heads of the organisations through the Human resource department to conduct a survey in the organisation and if required, the organisation was to be provided with a copy of the report. Incentives were not offered to coerce people to participate in the study.

3.12 Conclusion

Quantitative methodology was use to conduct this study, with surveys being used to collect data, based on the population sample of managers from SOEs in both Zimbabwe and South Africa. Detailed profiles of the six SOEs were presented. The sampling method of this study included random selection of respondents by both the HR department and the researcher. A total of 400 questionnaires emailed and 169 responses were received from managers of the SOEs. CEAI was used as a measurement tool with multiple regression being used for data analysis and interpretation.

4 CHAPTER: PRESENTATION AND DISCUSSION OF THE RESULTS

4.1 Introduction

The survey was conducted using respondents from six SOEs based in Zimbabwe and South Africa. The questionnaire was made up of 33 questions and 9 demographic questions totalling 40 questions. A total of 400 questionnaires were sent out and a total of 169 completed questionnaires were returned, this gives a response rate of 42%.The research instrument was further tested for validity and reliability during the actual research after it was tested for the pilot study. The four hypotheses were tested using multiple regression models with moderating variables and Pearson's correlations analysis.

4.2 Demographic profile of respondents

Table 4.1: Demographic profile of respondents

Organisation	**Responses Received**
National Social Security Authority (Zimbabwe)	63
NetOne (Zimbabwe)	26
Zimbabwe Electricity Transmission & Distribution Company (Zimbabwe)	14
Industrial Development Corporation (SA)	33
Social Housing Regulatory Authority (SA)	20
Estate Agency Affairs Board (SA)	13
Total	169

Source: Survey results (2015)

4.3 Sample Demographics

There were 103 responses from the online questionnaire. Of the 103 responses, 15 were removed because they were incomplete and thus 88 online responses remained. A total of 81 responses were collected using pen and paper. Thus, the total sample was 88 + 81 = 169.

The final sample of 169 as shown in table 8 below was made up of 62% male and 38% female respondents. Majority of these respondents were of African origin (89%), 4% Whites, 5% Indian and 2% were Coloured.

More than two thirds of the respondents (35%) have been with their organisation for the past 10 years or more, with only 19% having been with their organisation for 0 to 3 years. Almost half of the respondents i.e. 46% are in the Operations Department, 29% are in Administration, 13% are in Strategy and the other 12% are within other departments.

Two in every five respondents (41%) had a Master's degree, 36% had an Honours degree and 11% had undergraduate degrees. Almost equal proportions of respondents were Executive and Senior Management (34%), Middle Management (33%) and Junior Management (34%). Although the questionnaire had 4 management levels, Executive and Senior Management were collapsed into one level.

Table 4.2: Sample Demographics

Variable		Frequency	Percentage
Gender	Male	104	62%
	Female	65	38%
Race	African	151	89%
	White	6	4%
	Indian	8	5%
	Coloured	4	2%
Length of Service	0-3	32	19%
	4-6	41	24%
	7-9	37	22%
	10 or more	59	35%
Function	Operations	78	46%
	Administration	49	29%
	Strategy	22	13%
	Other	20	12%
Qualification	School leaving certificate (Grade 12)	1	1%
	National higher certificate	4	2%
	National Diploma	12	7%
	Undergraduate Degree	19	11%
	Honours Degree	61	36%
	Master's Degree	70	41%
	PhD	2	1%
Management level	Executive and Senior Management	57	34%
	Middle Management	55	33%
	Junior Management	57	34%

4.4 Measurement Scale

Management support, Reward/Reinforcement, and Work Discretion were considered as Independent variables and Innovation (made up of 6 attributes) and the number of projects implemented were the 2 dependent variables.

Management Support for Corporate Entrepreneurship was measured using 9 attributes that were measured on a 5-point scale where 1 was strongly disagree and 5 was strongly agree. Reward/ Reinforcement was measured using a total of 7 attributes, Work Discretion on 10 attributes and Innovation had 6 attributes, which were measured on the same rating scale. There was another form of innovation that was measured by asking the number of projects or new ideas that the respondents had implemented in the previous 12 months.

Cronbach's Alpha scores were computed for each of the 4 constructs to measure the reliability of the scale (internal consistency). The results are shown below in table 4.3;

Table 4.3: Measurement Scale

Construct	Item Code	Items Description	Cronbach's Alpha
Management support for Corporate Entrepreneurship (MS)	MS1	My organization is quick to use improved methods	0.843
	MS2	My organization is quick to use improved methods that are developed by workers	
	MS3	In my organization, developing one's own ideas is encouraged for the improvement of the corporation	
	MS4	Upper management is aware and very receptive to my ideas and suggestions	
	MS5	Many of the Top Managers are known for their experience with innovative processes.	
	MS6	Those employees who come up with innovative ideas on their own often receive management encouragement for their activities	

	MS7	People are often encouraged to take calculated risks with ideas around here	
	MS8	The term “risk taker” is considered a positive attribute for people in my work area	
	MS9	The ‘doers on projects” are allowed to make decisions without going through elaborate justification and approvals procedures	
Reward/ Reinforcement (RR)	RR1	My manager helps me get my work done by removing obstacles and roadblocks	0.673
	RR2	My manager would tell his/her boss if my work was outstanding	
	RR3	My current job provides a lot of challenges	
	RR4	A promotion usually follows from the development of new and innovative ideas	
	RR5	Individual risk takers are often recognized for their willingness to champion new projects, whether eventually successful or not	
	RR6	Individuals with successful innovative projects receive additional rewards and compensation beyond the standard reward system for their ideas and efforts	
	RR7	My knowledge and skills can enable me to be more proactive in new project developments	
Work Discretion (WD)	WD1	I feel that I am my own boss and do not have to double check all of my decisions with someone else	0.731
	WD2	The organization provides the freedom to use my own judgement	
	WD3	My work load allows me time to work on other innovative projects	

	WD4	I have the freedom to decide what I do on my job	
	WD5	This organization provides the chance to do something that makes use of my abilities	
	WD6	I have much autonomy on my job and am left on my own to do my own	
	WD7	I seldom have to follow the same work methods or steps for doing my major tasks from day to day	
	WD8	Mistakes are not followed by harsh criticisms and punishments	
	WD9	Red tape and slow approval cycles are problems in this company	
	WD10	Managers in this company strongly believe in delegating decision making responsibility	
Innovation	Innovation1	Our organisation applies IT to improve employee effectiveness	0.789
	Innovation2	Our organisation regularly researches and develops new products and services	
	Innovation3	Our organisation has implement new technology to improve processes	
	Innovation4	Our organisation has an incentive scheme that encourages innovation	
	Innovation5	Our managers encourage employees to develop new competencies	
	Innovation6	Our Managers creates an environment that encourages innovation	

Source: Survey results (2015)

The Cronbach's Alpha results revealed that Management support for Corporate Entrepreneurship (0.843) had the highest internal consistency, followed by Innovation (0.789), then Work Discretion (0.731) and Reward/ Reinforcement (0.673). These values were greater than 0.6 and thus there is acceptable internal consistency to compute a summated scale for each construct.

The summated scale was computed by calculating the average of all the items within each construct. The descriptive statistics and Pearson's correlation coefficient among the constructs are shown in Table 4.4 below.

4.5 Descriptive Analysis and Correlation Analysis

According to Lee (2015), Correlation coefficient – indicates the strength of a linear association, between +1 and -1 where the former is a perfect positive relationship and the latter is a perfect negative relationship. They are part of the regression process. Correlations close to zero indicate no relationship. The different correlations types include Pearson, which refers to relationships between two variables and this is mostly used, Spearman which deals with relationships between ordinal variables, Kendal's Tau, for paired data and lastly the Hoeffding dependency coefficient which is based on ranks (Lee 2015). In dealing with correlation scores, they further stated that scores bigger than 0.80 indicates strong evidence of association; with scores less than .20 showing no real evidence of association. Table 4.4 below illustrates the analysis of this study. The correlation analysis was conducted to assess the association between variables and to assess whether there could be a problem of multicollinearity (highly correlated independent variables)

Table 4.4: Descriptive Analysis and Correlation Analysis

DESCRIPTIVE STATISTICS & PEARSON CORRELATIONS						
	M	**SD**	**1.**	**2.**	**3.**	**4.**
1. MS	3.06	0.68	1.00			
2. RR	3.26	0.59	.72***	1.00		
3. WD	3.13	0.60	.58***	.64***	1.00	
4. Innovation	3.33	0.76	.74***	.67***	.48***	1.00

*Notes: M = Variable mean, SD = standard deviation, *** = p < .01, ** = p < .05, * = p < .10*

1=Hypothesis 1-MS (Management Support), 2= Hypothesis 2 (Reward & Reinforcement), 3= Hypothesis 3 (Work Discretion), 4=Hypothesis 4(Innovation)

The descriptive statistics show that Innovation (mean = 3.33) is the highest rated construct, followed by Reward/ Reinforcement (mean = 3.26), Word Discretion (mean = 3.13) and then Management support for Corporate Entrepreneurship (mean = 3.06) was the least rated construct. The Pearson's Correlation coefficient indicates that the constructs are correlated.

4.6 Analysis: Management Support

In this section, the results for hypothesis 1 will be presented. To reiterate, H1 (a) is stated as follows:

H1a (i). There is a positive relationship between management support and entrepreneurial action.

H1a (ii). The relationship between managerial support and entrepreneurial action is moderated by occupational/ management level.

To test these two hypotheses, a multiple regression model was fitted with Innovation as the dependent variable, Managerial support as the independent variable, Occupational level as a moderator variable and Qualification was a control variable.

The null hypothesis for hypothesis H1a (i) was that there is no relationship between management support and innovation while the alternative hypothesis was that there is a positive relationship between managerial support and entrepreneurial action.

The null hypothesis for hypothesis H1a (ii) was that the relationship between management support and innovation is not moderated by occupational level while the alternative hypothesis was that the relationship between management support and entrepreneurial action is moderated by occupational level. The results are shown below in table 4.5;

Table 4.5: Moderation Regression for Management Support and Innovation

Moderation Regressions						
	Model 1		**Model 2**		**Model 3**	
	B	β	B	β	B	β
Intercept	3.43***	0.00	3.42***	0.00	3.37***	0.00
Qualification	-0.02	-0.03	-0.02	-0.03	-0.01	-0.01
MS	0.83***	0.74	0.83***	0.74	0.83***	0.74
Occupational Level			0	-0.00	-0.01	-0.01
MS x Occupational Level					-0.15**	-0.11
R^2	0.54		0.54		0.55	
$\text{ADJ}R^2$	0.54		0.53		0.54	
PC	0.48		0.48		0.47	
AIC	-219.03		-217.03		-219.81	
SBC	-209.64		-204.52		-204.16	
BIC	-216.92		-214.84		-217.51	

*Notes: *** = p < .01, ** = p < .05, * = p < .10*

The results for model 1 show that there is a significant relationship between Management support and Innovation (B = 0.83***, Standardised better = 0.74, p-value < 0.001). The model shows that variation in Management support and qualification explains 54% of variation in innovation. Qualification (B = -0.02, Standardised better = -0.03, p-value > 0.10) is not significantly related to Innovation.

From model 1, since the p-value for management support is less than 0.05

and the coefficient of management support is positive, the null hypothesis for H1a (i) is rejected in favour of the alternative hypothesis. It is therefore concluded that there is a positive relationship between management support and entrepreneurial action and this this hypothesis is accepted.

Model 2 shows that occupation on its own has no impact on innovation (B = -0.00, Standardised better = -0.01, p-value > 0.10). On model 3, the introduction of the moderator Management support and Occupational Level (MS x O Occupational Level) led to a change in the R-Squared, from 0.54 to 0.55. The variable, MS x O Occupational Level had a negative and significant standardised beta (B = -0.15, Standardised better = -0.11, p-value < 0.05) since the p-value was less than 0.05. This means that the null hypothesis for H1a (ii) is rejected in favour of the alternative hypothesis. This implies that Occupational level moderates the relationship between Management support and innovation. A negative beta coefficient of the interaction term means that the relations between Management support and innovation decreases with an increase in occupational level that is the relationship is strongest at low occupational levels and weakens with increasing management levels. The relationship is presented graphically below in figure 4.1;

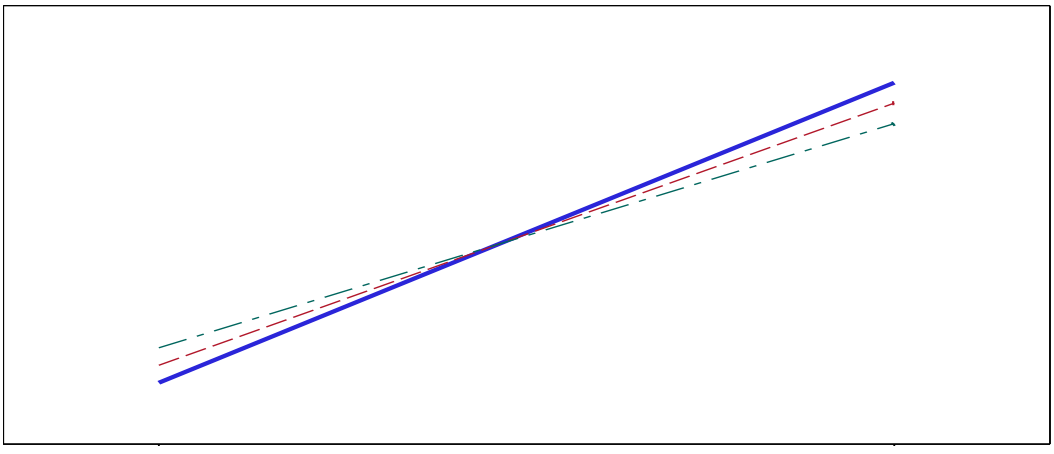


Figure 4.1: Moderation Effect of Occupational Level on the Relationship between MS and Innovation

It can be noted that the relationship between Management support and

innovation is strongest at lower levels of Management, followed by middle levels of management and lower at high levels of Management.

4.6.1 Analysis: Management Support and Implemented Projects

In this section, the results for hypothesis 1b will be presented. To reiterate, H1b is stated as follows:

H1b (i). There is a positive relationship between managerial support and number of projects implemented.

H1b (ii). The relationship between managerial support and number of projects implemented is moderated by occupational/ management level.

To test these two hypotheses, a multiple regression model was fitted with number of projects implemented as the dependent variable, Managerial support as the independent variable, Occupational level as a moderator variable and Qualification was a control variable.

The null hypothesis for hypothesis H1b (i) was that there is no relationship between management support and number of projects implemented while the alternative hypothesis was that there is a positive relationship between managerial support and the number of projects implemented.

The null hypothesis for hypothesis H1b (ii) was that the relationship between management support and number of projects implemented is not moderated by occupational level while the alternative hypothesis was that the relationship between managerial support and number of projects implemented is moderated by occupational level. The results are shown below;

Table 4.6: Moderation Regression for Management Support and Projects

Moderation Regressions						
	Model 1		**Model 2**		**Model 3**	
	B	β	B	B	B	β
Intercept	1.24***	0.00	1.25***	0.00	1.19**	0.00
Qualification	0.17**	0.15	0.16*	0.15	0.18**	0.16
MS	0.46***	0.26	0.46***	0.26	0.47***	0.26
Occupational Level			0.01	0.01	0.01	0.01
MS x Occupational Level					-0.17	-0.08
R^2	0.09		0.09		0.10	
$\mathrm{ADJ}R^2$	0.08		0.07		0.08	
PC	0.94		0.95		0.96	
AIC	57.13		59.12		59.89	
SBC	66.52		71.64		75.54	
BIC	59.24		61.31		62.19	

The results for model 1 show that there is a significant relationship between Management support and number of projects implemented (B = 0.46, Standardised better = 0.26, p-value < 0.001). There is also a significant relationship between qualification and number of projects implemented ((B = 0.17, Standardised better = 0.15, p-value < 0.05).

The model however shows that Management support and qualification explain only 9% of variation in the number of projects implemented.

From model 1, since the p-value for management support is less than 0.05 and the coefficient of management support is positive (0.56), the null hypothesis for H1b (i) is rejected in favour of the alternative hypothesis. It is therefore

concluded that there is a positive relationship between managerial support and number of projects implemented.

Model 2 shows that occupation level on its own has no impact on innovation (B = 0.01, Standardised better = 0.01, p-value > 0.10). On model 3, the variable, MS x Occupational Level is not significantly related to number of projects implemented (B = -0.17, Standardised better = -0.08, p-value > 0.10). Since the p-value was greater than 0.05. This means that the null hypothesis for H1b (ii) is not rejected. This implies that Occupational level does not moderate the relationship between Management support and number of projects implemented.

Thus, although Management support results in more projects being implemented within organisations, the relationship does not differ by Management level.

4.7 Analysis: Reward and Reinforcement and Innovation

In this section, the results for hypothesis 2 are presented. To reiterate, H2 (a) is stated as follows:

H2a (i). There is a significant relationship between reward and reinforcement with staff‘s motivation to be innovative / involved in process innovation.

H2a (ii). The relationship between reward and reinforcement and staff‘s motivation to be innovative / involved in process innovation is moderated by occupational level.

To test these two hypotheses, a multiple regression model was fitted with Innovation as the dependent variable, reward and reinforcement as the independent variable, Occupational level as a moderator variable and Qualification was a control variable.

The null hypothesis for hypothesis H2a (i) was that there is no relationship between reward and reinforcement and innovation while the alternative hypothesis was that there is a positive relationship reward and reinforcement and staff’s motivation to be innovative.
The null hypothesis for hypothesis H2a (ii) was that the relationship between reward and reinforcement and staff‘s motivation to be innovative / involved

in process innovation is not moderated by occupational level. On the other hand, the alternative hypothesis was that the relationship between reward and reinforcement and staff's motivation to be innovative / involved in process is not moderated by occupation. The results are in table 4.7;

Table 4.7: Moderation Regressions for Reward / Reinforcement and Innovation

Moderation Regressions						
	Model 1		**Model 2**		**Model 3**	
	B	β	B	B	B	B
Intercept	3.37***	0.00	3.35***	0.00	3.33***	0.00
Qualification	-0.01	-0.01	0	-0.01	0	-0.00
RR	0.87***	0.67	0.87***	0.67	0.86***	0.67
Occupational Level			-0.01	-0.02	-0.01	-0.01
RR x Occupational Level					-0.08	-0.05
R^2	0.45		0.45		0.46	
$\mathrm{ADJ}R^2$	0.45		0.44		0.44	
PC	0.57		0.57		0.58	
AIC	-189.22		-187.29		-186.12	
SBC	-179.83		-174.77		-170.47	
BIC	-187.11		-185.09		-183.81	

The results for model 1 show that there is a significant relationship between Reward/ Reinforcement and innovation (B = 0.87, Standardised better = 0.67, p-value < 0.001). There is also a significant relationship between qualification and innovation (B = 0.17, Standardised better = 0.15, p-value < 0.05).

The model however shows that Reward/ Reinforcement and qualification explain only 9% of variation in innovation.

Model 1 shows that the p-value for Reward/ Reinforcement is less than 0.05 and the coefficient of Reward/ Reinforcement is positive (beta = 0.87***). This means that the null hypothesis for H2a (i) is rejected in favour of the alternative hypothesis. It is therefore concluded that there is a significant relationship between reward and reinforcement with staff's motivation to be innovative / involved in process innovation.

Model 2 shows that occupation on its own has no impact on innovation (B = -0.00, Standardised better = -0.01, p-value > 0.10). On model 3, the variable, RR x Occupational Level is not significantly related to innovation (B = -0.08, Standardised better = -0.05, p-value > 0.10). Since the p-value was greater than 0.05, this means that the null hypothesis for H2b (ii) is not rejected. This implies that Occupational level does not moderate the relationship between reward and reinforcement and staff's motivation to be innovative / involved in process innovation.

Thus, although Reward /Reinforcement results in innovation within organisations, the relationship does not differ by management level.

4.7.1 Analysis: Reward/Reinforcement and Implemented Projects (Innovation)

In this section, the results for hypothesis 2b are presented. To reiterate, H2b is stated as follows:

H2b (i). There is a positive relationship between Reward/ Reinforcement and number of projects implemented.

H2b (ii). The relationship between Reward/ Reinforcement and number of projects implemented is moderated by occupational level.

To test these two hypotheses, a multiple regression model was fitted with number of projects implemented as the dependent variable Reward/ Reinforcement as the independent variable, Occupational level as a moderator variable and Qualification was a control variable.

The null hypothesis for hypothesis H2b (i) was that there is no relationship between Reward/ Reinforcement and number of projects implemented while the alternative hypothesis was that there is a positive relationship between Reward/ Reinforcement and the number of projects implemented.

The null hypothesis for hypothesis H2b (ii) was that the relationship between Reward/ Reinforcement and number of projects implemented is not moderated by occupational level while the alternative hypothesis was that the relationship between Reward/ Reinforcement and number of projects implemented is moderated by occupational level. The results are shown below;

Table 4.8: Moderation Regressions for Reward/Reinforcement and Implemented Projects

Moderation Regressions						
	Model 1		**Model 2**		**Model 3**	
	B	β	B	β	B	B
Intercept	1.22***	0.00	1.24***	0.00	1.21***	0.00
Qualification	0.17**	0.15	0.17*	0.15	0.17**	0.15
RR	0.73***	0.35	0.73***	0.35	0.73***	0.35
Occupational Level			0.02	0.01	0.02	0.01
RR x Occupational Level					-0.13	-0.05
R^2	0.15		0.15		0.15	
$ADJR^2$	0.14		0.14		0.13	
PC	0.88		0.89		0.90	
AIC	45.63		47.61		49.11	
SBC	55.02		60.13		64.76	
BIC	47.74		49.80		51.41	

The results for model 1 show that there is a significant relationship between Reward/ Reinforcement and Innovation (B = 0.73***, Standardised better = 0.35, p-value < 0.001). There is also a significant relationship between qualification and innovation (B = 0.17, Standardised better = 0.15, p-value < 0.05).

The model however shows that Reward/ Reinforcement and qualification explain only 15% of variation innovation.

From model 1, since the p-value for Reward/ Reinforcement is less than 0.05 and the coefficient of Reward/ Reinforcement is positive (0.73***), the null hypothesis for H2b (i) is rejected in favour of the alternative hypothesis. It is therefore concluded that there is a positive relationship between Reward/ Reinforcement and number of projects implemented.

Model 2 shows that occupation level on its own has no impact on innovation (B = 0.01, Standardised better = 0.02, p-value > 0.10). On model 3, the variable, RR x Occupational Level is not significantly related to number of projects implemented (B = -0.13, Standardised better = -0.05, p-value > 0.10). Since the p-value was greater than 0.05, this implies that the null hypothesis for H2b (ii) is not rejected. Thus, Occupational level does not moderate the relationship between Reward /Reinforcement and number of projects implemented.

Although Reward /Reinforcement results in more projects being implemented within organisations, the relationship does not differ by Reward/ Reinforcement.

4.8 Analysis: Work Discretion and Innovation

In this section, the results for hypothesis 3 are presented. To reiterate, H3 (a) is stated as follows:

H3a (i). There is a significant relationship between work discretion and innovation.

H3a (ii). The relationship between Work Discretion and innovation is moderated by occupational level.

A multiple regression model was fitted with Innovation as the dependent variable, Work Discretion as the independent variable, Occupational level as a moderator variable and Qualification was a control variable to assess the 2 hypotheses.

The null hypothesis for hypothesis H3a (i) was that there is no relationship between Work Discretion and innovation while the alternative hypothesis was

that there is a positive relationship between Work Discretion and innovation.

The null hypothesis for hypothesis H1a (ii) was that the relationship between Work Discretion and innovation is not moderated by occupational level while the alternative hypothesis was that the relationship between Work Discretion and entrepreneurial action is moderated by occupational level. The results are shown in Table 4.9 below;

Table 4.9: Moderation Regressions for Work Discretion and Innovation

Moderation Regressions						
	Model 1		**Model 2**		**Model 3**	
	B	β	B	B	B	β
Intercept	3.48***	0.00	3.39***	0.00	3.4***	0.00
Qualification	-0.03	-0.04	-0.01	-0.02	-0.02	-0.02
WD	0.62***	0.48	0.63***	0.49	0.62***	0.48
Occupational Level			-0.09	-0.10	-0.09	-0.10
WD x Occupational Level					0.16	0.10
R^2	0.23		0.24		0.25	
$ADJR^2$	0.22		0.23		0.23	
PC	0.80		0.80		0.80	
AIC	-131.56		-131.54		-131.88	
SBC	-122.17		-119.02		-116.23	
BIC	-129.45		-129.35		-129.58	

The results for model 1 show that there is a significant relationship between Work Discretion and Innovation (B = 0.62, Standardised better = 0.48, p-value < 0.001). There is however no significant relationship between qualification and innovation (B = -0.03, Standardised better = -0.03 p-value > 0.10).

The model however, shows that Work Discretion and qualification explain only 23% of variation innovation.

Model 1 shows that the p-value for Work Discretion is less than 0.05 and the coefficient is positive (beta = 0.62***). This means that the null hypothesis for

H3a (i) is rejected in favour of the alternative hypothesis. It is therefore concluded that there is a positive significant relationship between Work Discretion and innovation.

Model 2 shows that occupation on its own has no impact on innovation (B = -0.10, Standardised better = -0.09, p-value > 0.10). On model 3, the variable, WD x Occupational Level is not significantly related to innovation (B = 0.16, Standardised better = 0.10, p-value > 0.10) since the p-value is greater than 0.05 and the null hypothesis is not rejected. Thus, it is concluded that Occupational level does not moderate the relationship between work discretion and innovation.

Thus, although Work Discretion encourages innovation, the relationship does not differ by management level.

4.8.1 Analysis: Work Discretion and Implemented Projects (Innovation)

To test this hypothesis, a regression model was fitted with Number of Projects as the dependent variable, Work Discretion as the independent variable, Occupational level as a moderator variable and Qualification was a control variable. The null hypothesis is that there is relationship among the variables and the alternative hypothesis was that a significant relationship between Work Discretion and number of projects and the relationship is moderated by Qualification. The results are shown below;

In this section, the results for hypothesis H3b are presented. To reiterate, H3b is stated as follows:

H3b (i). There is a relationship between Work Discretion and number of projects implemented.

H3b (ii). The relationship between Work Discretion and number of projects implemented is moderated by occupational level.

To test these two hypotheses, a multiple regression model was fitted with number of projects implemented as the dependent variable, Work Discretion as the independent variable, Occupational level as a moderator variable and Qualification was a control variable.

The null hypothesis for hypothesis H3b (i) was that there is no relationship between Work Discretion and number of projects implemented while the alternative hypothesis was that there is a relationship between Work Discretion and the number of projects implemented.

The null hypothesis for hypothesis H3b (ii) was that the relationship between Work Discretion and number of projects implemented is not moderated by occupational level while the alternative hypothesis was that the relationship between Work Discretion and number of projects implemented is moderated by occupational level. The results are shown below;

Table 4.10: Moderation Regressions for Work Discretion and Number of Implemented Projects

Moderation Regressions						
	Model 1		**Model 2**		**Model 3**	
	B	β	B	B	B	β
Intercept	1.35***	0.00	1.29***	0.00	1.29***	0.00
Qualification	0.15*	0.13	0.16*	0.14	0.16*	0.14
WD	0.61***	0.30	0.61***	0.30	0.62***	0.30
Occupational Level			-0.05	-0.04	-0.06	-0.04
WD x Occupational Level					-0.08	-0.03
R 2	0.11		0.11		0.11	
ADJR2	0.10		0.10		0.09	
PC	0.92		0.93		0.94	
AIC	53.18		54.94		56.74	
SBC	62.57		67.46		72.39	
BIC	55.29		57.13		59.04	

The results for model 1 show that there is a significant relationship between Work discretion and number of projects implemented (B = 0.61***, Standardised better = 0.30, p-value < 0.001). There is also a significant relationship between qualification and number of projects implemented ((B = 0.15, Standardised better = 0.13, p-value < 0.05).

The model however shows that Work discretion and qualification explain

only 11% of variation in the number of projects implemented.

From model 1, since the p-value for Work discretion is less than 0.05 and the coefficient (0.61***) was positive, the null hypothesis for H3b (i) is rejected in favour of the alternative hypothesis. It is therefore concluded that there is a positive relationship between Work discretion and number of projects implemented.

Model 2 shows that occupation on its own has no impact on number of projects implemented (B = -0.05, Standardised better = -0.04, p-value > 0.10). On model 3, the variable, WD x Occupational Level is not significantly related to number of projects implemented (B = -0.08, Standardised better = -0.03, p-value > 0.10) since the p-value was greater than 0.05. This implies that the null hypothesis for H3b (ii) is not rejected and it is concluded that Occupational level does not moderate the relationship between Reward /Reinforcement and number of projects implemented.

Thus, although Work discretion results in more projects being implemented within organisations, the relationship does not differ by management level.

4.9 Different levels of internal antecedents and innovation within South African and Zimbabwe state owned entities.

Independent samples t-test was conducted to assess whether there was a difference in the perception on Management support, Reward/ Reinforcement, Work Discretion, and Innovation between South Africa and Zimbabwe. For each of the 4 sub-propositions, the null proposition was that there is no difference in the rating of South African SOEs compared to the Zimbabwean SOEs. The alternative proposition was that there is a difference in the rating of South African SOEs compared to the Zimbabwean SOEs. The tests were conducted at 5% significance level. The results are shown below;

Table 4.11: Independent samples t-test between South Africa and Zimbabwe - Overall

Group Statistics						Independent Samples Test	
Country		N	Mean	Std. Deviation	Std. Error Mean	T	P-value
Management Support	South Africa	66	2.963	0.708	0.087	-1.534	0.127
	Zimbabwe	103	3.126	0.653	0.064		
Reward/ Reinforcement	South Africa	66	3.147	0.606	0.075	-2.070	0.040
	Zimbabwe	103	3.338	0.572	0.056		
Work Discretion	South Africa	66	2.995	0.581	0.072	-2.307	0.022
	Zimbabwe	103	3.209	0.595	0.059		
Innovation	South Africa	66	3.247	0.694	0.085	-1.113	0.267
	Zimbabwe	103	3.381	0.800	0.079		

Reward/ Reinforcement was rated significantly higher for Zimbabwe (mean = 3.338) compared to 3.147 for South Africa (p-value = 0.04 < 0.05). Work Discretion was also rated significantly higher for Zimbabwe (mean = 3.209) compared to 2.995 for South Africa with a p-value of 0.022. There was no significant difference for Management Support (p-value = 0.127) and Innovation (p-value = 0.267).

Thus, the null proposition is not rejected for hypothesis H4a and H4b since the p-values were greater than 0.05. This implies that South Africa and Zimbabwe have the same level of Innovation and Management Support.

On the other hand the null hypothesis is rejected for Hypothesis H4c and H4d since the p-values were less than 0.05. This implies that Reward/ Reinforcement and Work Discretion differ between Zimbabwe and South Africa.

4.9.1 Junior Management level analysis

The independent samples t-tests were also conducted among junior management of the two countries. The results are shown below;

Table 4.12: Independent samples t-test between South Africa and Zimbabwe - junior management

Group Statistics						Independent Samples Test	
Country		N	Mean	Std. Deviation	Std. Error Mean	T	P-value
Management Support	South Africa	18	3.105	0.587	0.138	0.067	0.947
	Zimbabwe	39	3.091	0.779	0.125		
Reward/ Reinforcement	South Africa	18	3.167	0.582	0.137	-1.299	0.199
	Zimbabwe	39	3.381	0.577	0.092		
Work Discretion	South Africa	18	2.952	0.382	0.090	-0.940	0.352
	Zimbabwe	39	3.079	0.627	0.100		
Innovation	South Africa	18	3.380	0.639	0.151	0.272	0.787
	Zimbabwe	39	3.312	0.961	0.154		

Zimbabwe had higher scores for Management Support, Reward/ Reinforcement and Work Discretion but South Africa had a higher Innovation score among junior management. The differences were however not significant for all the 4 variables since the p-values were greater than 0.05. This implies that there are no significant differences between the opinions of junior management by country.

Thus, the null proposition is not rejected for all the 4 propositions since the p-values were greater than 0.05. This implies that South Africa and Zimbabwe have the same level of Innovation, Management Support, Reward/

Reinforcement and Work Discretion among junior management. The analysis was repeated for Middle Management and the results are shown below;

4.9.2 Middle management analysis

Table 4.13: Independent samples t-test between South Africa and Zimbabwe - Middle management

Group Statistics						Independent Samples Test	
Country		N	Mean	Std. Deviation	Std. Error Mean	t	P-value
Management Support	South Africa	26	3.009	0.671	0.132	-0.785	0.436
	Zimbabwe	29	3.130	0.471	0.087		
Reward/ Reinforcement	South Africa	26	3.132	0.674	0.132	-1.010	0.318
	Zimbabwe	29	3.305	0.592	0.110		
Work Discretion	South Africa	26	2.965	0.664	0.130	-1.935	0.058
	Zimbabwe	29	3.272	0.507	0.094		
Innovation	South Africa	26	3.282	0.694	0.136	-1.300	0.199
	Zimbabwe	29	3.517	0.648	0.120		

The scores Management Support (p-value = 0.436), Reward/ Reinforcement (p-value = 0.318), Work Discretion (p-value = 0.058) and Innovation (p-value = 0.199) among Middle Management were not statistically different for South Africa and Zimbabwe. This is because the p-values were all greater than 0.05.

Thus, the null propositions is not rejected for all the 4 propositions since the p-values were greater than 0.05. This implies that South Africa and Zimbabwe have the same level of Innovation, Management Support, Reward/ Reinforcement and Work Discretion among Middle management.

4.9.3 Senior Management Analysis

The analysis was also conducted for Top/ Senior Management and the results are shown below;

Table 4.14: Independent samples t-test between South Africa and Zimbabwe – Top/ Senior Management

Group Statistics						Independent Samples Test	
Country		N	Mean	Std. Deviation	Std. Error Mean	t	P-value
Management Support	South Africa	22	2.793	0.829	0.177	-1.778	0.084
	Zimbabwe	35	3.162	0.644	0.109		
Reward/ Reinforcement	South Africa	22	3.149	0.567	0.121	-1.099	0.277
	Zimbabwe	35	3.318	0.564	0.095		
Work Discretion	South Africa	22	3.065	0.628	0.134	-1.411	0.164
	Zimbabwe	35	3.303	0.615	0.104		
Innovation	South Africa	22	3.098	0.741	0.158	-1.242	0.220
	Zimbabwe	35	3.345	0.722	0.122		

The scores Management Support (p-value = 0.084), Reward/ Reinforcement (p-value = 0.277), Work Discretion (p-value = 0.164) and Innovation (p-value = 0.220) among Executive and Senior Management were not statistically different for South Africa against Zimbabwe. This is because the p-values were all greater than 0.05.

The null proposition is not rejected for each of the 4 propositions since the p-values were greater than 0.05. This implies that South Africa and Zimbabwe have the same level of Innovation, Management Support, Reward/ Reinforcement and Work Discretion among Top management.

4.9.4 Number of Implemented Projects in South Africa vs Zimbabwe analysis

Independent samples t-test was also conducted to assess whether there was a difference in the number of projects implemented in South Africa against those implemented in Zimbabwe.

The null proposition is that there is no significant difference in the number of projects implemented in South African SOEs against those implemented in Zimbabwean SOEs. The alternative hypothesis was that there is a significant difference in the number of projects implemented in South African SOEs compared to Zimbabwean SOEs. The test was conducted at 5% significance level. The results are shown below;

Table 4.15: No of Projects implemented in South Africa versus Zimbabwe

Country	N	Mean	95% CL Mean		Std Dev
South Africa	66	1.73	1.497	1.96	0.937
Zimbabwe	103	2.32	2.06	2.58	1.330
Diff (1-2)	Pooled	-0.59	-0.96	-0.22	1.193
Diff (1-2)	Satterthwaite	-0.59	-0.94	-0.25	

Table 4.16: Equality of Variances

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	167	-3.15	0.0019
Satterthwaite	Unequal	165.44	-3.40	0.0009

Equality of Variances				
Method	Num DF	Den DF	F Value	Pr > F
Folded F	102	65	2.01	0.0028

The average number of projects implemented in Zimbabwe (mean = 2.32 ± 2.58) is significantly higher than that for South Africa (mean = 1.73 ± 1.497). This is because the p-value for the t-test was 0.0009 which is less than 0.05. The Satterthwaite (unequal variance method was used because the p-value for the equality of variance test resulted in a p-value of 0.0028 (<0.05) as shown in table 20. Even if the Polled variance method was used the p-value was also less than 0.05 (p-value = 0.0019)

This means that the null proposition is rejected in favour of the alternative proposition. It is therefore concluded that that there is a significant difference in the number of projects implemented in South African SOEs compared to Zimbabwean SOEs.

The distribution of the number of projects for Zimbabwe and South Africa are illustrated below;

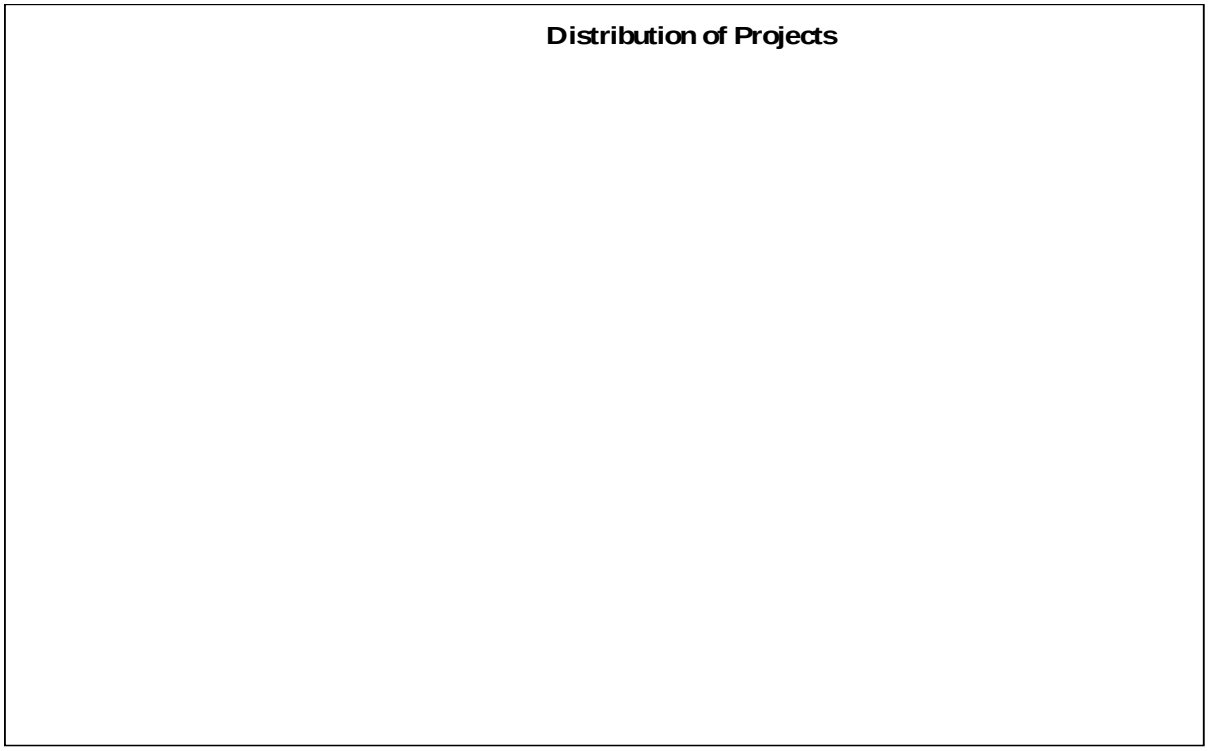


Figure 4.2: Distribution of Projects

The distribution indicates that there were more projects implemented in Zimbabwe as compared to South Africa.

4.10 Conclusion

Results from the survey indicated that for hypothesis 1, there was a significant relationship between management support and innovation and that this relationship was strongest at junior management level. For hypothesis 2, results indicated that this hypothesis was proven to be positive as the significance of reward and innovation was proven but the relationship did not vary at different management levels. In terms of hypothesis 3, the survey results showed that there was a significant relationship between work discretion and innovation and that the relationship did not differ at different management levels. Results also indicated that reward and reinforcement was rated significantly higher for Zimbabwe than South Africa as well as Work discretion with Management support showing no significant difference. A summary of results is illustrated below in table 4.17 below

Table 4.17: Summary of hypothesis results

HYPOTHESIS	ACCEPT OR REJECT
Management Support	
H1a(i): There is a positive relationship between management support and entrepreneurial action	Accepted
H1a(ii): The relationship between management support and entrepreneurial action is moderated by occupational level	Accepted
H1b(i):There is a positive relationship between management support and number of projects implemented	Accepted
H1b(ii): The relationship between management support and number of projects implemented is moderated by occupational level	Rejected
Reward / Reinforcement	
H2a(i): There is a significant relationship between reward/reinforcement with staff's motivation to be innovative	Accepted
H2a(ii): The relationship between reward/reinforcement and entrepreneurial action is moderated by occupational level	Rejected
H2b(i):There is a positive relationship between reward/reinforcement and number of projects implemented	Accepted

H2b(ii): The relationship between reward/reinforcement and number of projects implemented is moderated by occupational level	Rejected
Work Discretion	
H3a(i): There is a significant relationship between work discretion and innovation	Accepted
H3a(ii): The relationship between work discretion and innovation is moderated by occupational level	Rejected
H3b(i):There is a positive relationship work discretion and number of projects implemented	Accepted
H3b(ii): The relationship between work discretion and number of projects implemented is moderated by occupational level	Rejected
H4: Level of innovation with South African state owned entities is different from Zimbabwe state owned entities.	Accepted

The results above are discussed in detail in Chapter 5 supported by the literature available on this topic.

5 CHAPTER: DISCUSSION OF THE RESULTS

5.1 Introduction

The study was a follow up to other studies by Hornsby, et al. (2002; 2009) and Borins, et al. (2000; 2002) conducted earlier which sought to examine the role that organisational factors if properly configured will foster corporate entrepreneurship in State Owned Entities. Management support, reward/reinforcement and work discretion were all found to have a significant relationship with innovation. Furthermore, occupational level was also found to moderate the relationship between the organisational factors and innovation. The level of CE in both Zimbabwe and South Africa was also investigated, and it was found that in some cases managers in Zimbabwean entities perceived their organisations to support the three organisational factors more than how the same was perceived by managers in South African entities. Detailed discussions of results are presented below with reference to current literature.

5.2 Discussion pertaining to Management Support and Innovation (Hypothesis 1)

Hornsby, et al. (2009) in their study, using a sample of 458 managers, found that the relationship between managers' perception of organisational factors and number of entrepreneurial ideas implemented differed at structural levels. In comparing these results, to the results of our study, a positive relationship between management support and innovation was found. This is supported by Kuratko, Hornsby and Covin (2014), who also found that management support had a direct positive relationship with innovation outcomes. When the relationship was tested using the number of new ideas implemented, the same results were confirmed.

When the relationship between management support and innovation was moderated by occupational level, the relationship was strong at junior management level. These findings are in line with conceptual studies, especially those by Burgelman (1983;1984) who emphasised the role of first line

managers in a bottom up process of CE. According to Floyd and Lane (2000), junior managers' experimenting role was demonstrated through initiation of new projects which could explain the need for management support in our research results. However, our study results contradict results by Hornsby, et al. (2009) who found that the relationship was much stronger or positive for senior managers and middle managers than junior managers. Our junior management respondents perceived that top management support, nurtured entrepreneurial behaviour including supporting their innovation ideas and providing them with the required resources to implement their ideas. This difference could be attributed to the difference in samples as well as the fact that this study was in the public sector, instead of the private sector. Difference in organisational culture might also have an impact, especially if junior managers struggle to engage in entrepreneurial activities unless there is more support from top management. Senior management might have more control and have less need for support to innovate. All studies seem to confirm differences across managerial levels in relation to perceived antecedents to entrepreneurial activities and number of implemented projects (Hornsby, et al.

2009) with complementing findings by Floyd and Wooldridge (1990; 1992; 1994), Floyd and Lane (2000) and Kraut, et al. (2005). They all came up with findings that managerial levels or occupation levels moderated the relationship between entrepreneurial antecedents and innovation

However, of interest is when the hypothesis H1 b (ii) was tested which looked at the moderating effect of management support and number of projects implemented, the relationship was not moderated. This result is in line with CE literature which "treats managers as a humongous group", (Hornsby, et al., 2009, p.237). Results seem to imply the number of new ideas or projects implemented did not differ at different management levels. The results contradict organisational strategy research according to Floyd and Lane (2000) that accepts that managers at different levels play different roles, and that entrepreneurial actions will differ in line with their role. Senior managers' role is mostly to ratify, recognise and direct, middle managers are supposed to approve, clarify and guide entrepreneurial activities, whilst junior managers have an experimenting role (Kuratko, et al., 2005), therefore logic would expect

the number of new projects implemented to differ with the differences in roles. Further research can therefore be considered to find out the contributing factors to this contradiction.

5.3 Discussion pertaining to Reward/Reinforcement

Hypothesis 2: There is a significant relationship between reward and reinforcement with staff's motivation to be innovative.

Based on results of this study, a significant relationship was found between reward /reinforcement and innovation. The same positive relationship was also found when reward / reinforcement was tested with number of projects implemented. This finding confirms all the other previous studies by Hornsby, et al. (2002) and Sathe (1989) and available literature that emphasises the critical role that reward/ reinforcement was positively related to entrepreneurial outcomes and the success of corporate entrepreneurship.

The role that reward plays in the entrepreneurship process is critical as it makes a big difference in motivating staff to perform, provided they see their efforts being fairly measured and rewarded when compared to their colleagues. Reward was the second highest rated constructs at a mean of 3.26 in our sample, which is an indication that the managers perceived it to be a critical organisational antecedent. They also perceived it to be more present in their organisation when compared to the other two independent variables. According to Hornsby, et al. (2002), for a reward system to encourage entrepreneurial activity, it must consider goals, feedback and emphasis on individual responsibility and incentive must be based on outcomes.

When reward and reinforcement and innovation was moderated with occupational level, results showed that occupational level was not significantly related to innovation, nor was it significantly related to the number of projects implemented (B = -0.13, Standardised better = -0.05, p-value > 0.10) in model 3. There were more projects implemented but they did not differ according to management level. Results therefore indicated that managers at all levels perceived reward and reinforcement to be equally important and its absence at

any of the managerial levels will affect innovation.

According to Hayton (2005), reward and reinforcement positively motivate junior management to be innovative as they are more risk averse and will need rewards to encourage them to take risks, thereby overcoming their aversion. This is contrary to our results which show that reward was perceived to positively motivate managers at all levels. The reason for the difference could be as a result of the sample used, which was in the public sector where salaries are not as high as in the private sector which makes paying extra incentives to be a strong motivator for innovation and performance at all managerial levels.

5.4 Discussion pertaining to Work Discretion and Innovation

Hypothesis 3: There is a significant relationship between work discretion among different levels of management

Tolerance for failure and freedom to operate freely without excessive oversight and delegation of authority and responsibility has been identified to be a strong incentive for entrepreneurial behaviour (Hornsby, et al., 2009). Their research further showed that there was a more positive relationship between work discretion and entrepreneurial action at senior and middle management than with junior managers. This was supported by Kuratko, et al. (2001), who suggested that work discretion to experiment will result in entrepreneurial outcomes.

Our survey results show that there was a significant relationship between work discretion and innovation, (B = 0.62, Standardised better = 0.48, p-value < 0.001). When work discretion was considered with number of projects implemented, the relationship was also found to be significant (B = 0.61, Standardised better = 0.30, p-value < 0.001).

Taking into consideration our sample of SOEs which operated in the public sector that is governed by rules and regulations, where any mistake or failure carries a big risk, it is logical that managers considers work discretion to be low. Failure attracts criticism from opposition political parties, the media and public in general and as a result, SOEs might struggle to configure this aspect in a way

that it can encourage innovation. This could explain why work discretion was the least rated construct out of all four variables.

When occupational level was used to moderate the relationship between work discretion and innovation (factor questions on innovation), and also with number of projects implemented, our results showed that although work discretion encouraged innovation, the relationship did not differ by management level. The number of implemented projects would improve irrespective of management level. This is contrary to other researches which concluded that senior managers were more likely to use work discretion to generate entrepreneurial outcomes, with middle management generating them at a faster rate, followed by senior management (Kraut, et al, 2005). Their argument was that, due to the differences in roles played with junior managers focusing on instructing others to perform, middle managers on linking groups and senior managers on scanning the environment, therefore the influence of work discretion should differ at these management levels. This difference in results could be that our sample of managers working in a bureaucratic environment governed by processes and procedures that are stringent, inadequate resources, turf fights and hostile attitudes which affect all managers at all levels, the absence or presence of work discretion will affect their motivation to be entrepreneurial in the same way, thereby allowing them to generate more entrepreneurial activities. Work discretion is also associated with job satisfaction which can lead to increased entrepreneurial action (Kuratko, Hornsby & Bishop, 2005), therefore if managers perceive the environment to provide work discretion which in turn, increase their job satisfaction, then the tendency to be innovative can occur at all levels of management.

5.5 Discussion pertaining to the comparison of perceived internal organisational antecedents in both Zimbabwe and South African State's owned entities

The CEAI instrument measured the degree to which the individuals in the six SOEs perceived management support, reward and reinforcement and work discretion. With a rating scale of 1 to 5 being used and 5 being the highest, the

higher the score, the more the organisation supported the three independent variables (Kuratko, Hornsby, & Covin, 2014). T-tests were conducted to assess the difference in levels of perception. Results indicated that managers in all six entities perceived variables to be low, meaning the organisations were not configuring the antecedents enough that encourage entrepreneurial behaviour. However all six organisations have scores of less than 4 which is agree and 5 being strongly agree.

5.5.1 Comparing South Africa to Zimbabwe

Results as per figure (5.1) below, indicated that when you compare Zimbabwe and South Africa, reward/ reinforcement and work discretion was rated higher for Zimbabwe but the two countries had the same level of innovation and Management support. IDC in South Africa and NSSA in Zimbabwe had the highest levels of management support, reward/reinforcement and innovation as compared to the other four entities. Results also showed that Zimbabwe had higher scores for all factors at junior management than South Africa. However the scores did not differ at middle and senior management.

Zimbabwe as a country has been in a survival mode with the economy not growing for a number of years, which has resulted in staff looking for opportunities to stay afloat. The Minister of Finance in 2014 announced some reforms to be implemented in the public sector which would result in the introduction of governance codes and the amendments to the remuneration policy framework, aimed at addressing anomalies as well as enforcement of performance accountability (Rusvingo, 2014). Thus, if these changes have already started filtering through the SOEs, the impact of the changes could have attributed to the high scores.

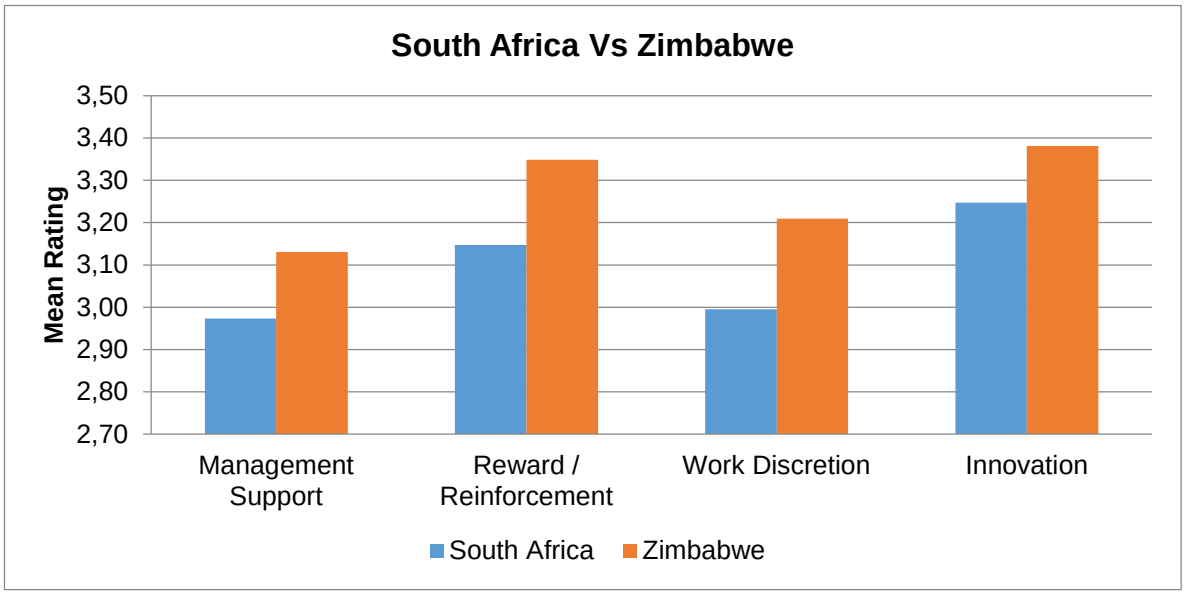


Figure 5.1: Innovation comparison between Zimbabwe and South Africa

5.5.2 Results by SOEs

In reviewing the results of IDC in South Africa and NSSA in Zimbabwe, the levels were high for IDC as it has played a critical role since its establishment by launching big projects like assisting in the establishment of Sasol, funding BEE projects, according to the Financial Mail (Dec 3-9, 2015). It is also considered to be one of the few SOEs in South Africa which has recorded success and is self-funding. NSSA in Zimbabwe, according to its annual financial report (2013), had been recording some notable achievements in community development with a number of investments having been done in a number of industries. However, this success has now been overshadowed by reports of maladministration and bad investment decisions, according to the Financial Gazette (October 19, 2015). The organisation was reported to having been giving its managers free interest loans, housing loans, above market salary packages, especially for the executive team. The fact that there were a number of projects running and the organisation had funds to invest in its organisational factors, could be attributed to the high rating it received.

SHRA in South Africa and ZETDC and NetOne in Zimbabwe were rated as having the lowest levels of management support, reward/reinforcement, work discretion and innovation of the six entities. SHRA has been under administration since 2014 and their CEO and Corporate Services Managers left

in the same year amid allegations of creative use of funds, according to Business Day (August 13, 2014). The organisation's functions and authority to operate independently was now limited and this had an impact on the implementation of projects and any changes in the organisation. NetOne, at the time of this survey, had a major restructuring and its expansion was curtailed by financial constraints, according to The Source (June 23, 2014), and it was losing market share. ZETDC was in the midst of electricity problems being experienced by Zimbabwe. All these issue could have contributed to the low scores as per figure (14) that the organisations received as a result of managers perceiving the environment not to be conducive for entrepreneurial behaviour.

According to Ireland, Kuratko and Covin (2003), managerial behaviour affects the degree of success achieved by implementing any corporate entrepreneurship activities. It can therefore be concluded that the level of support for internal factors that encourage entrepreneurial behaviour in SOEs is still very low, based on the results presented in figure 5.2 below.

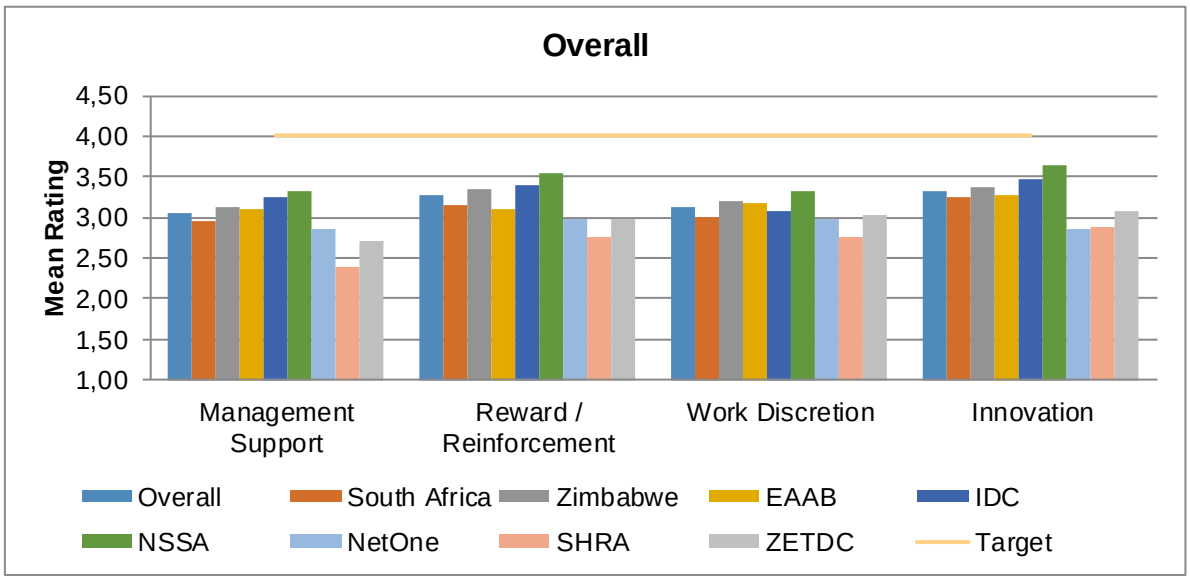


Figure 5.2: Managerial CE Perception for Organisation Antecedents

5.5.3 Results by Gender

Results by gender in figure 5.3 below, show that for all three antecedents of organisational entrepreneurship, males seem to perceive the organisation to be providing them with more support to be entrepreneurial. They rated all

sections of the antecedents as more positive and higher than their female counterparts. The only plausible reason for this could be that traditionally, in most organisations, especially at management level, and in particular, the organisations used for this research, they are male dominated which puts them in a position to be afforded more opportunities than their female counterparts. 62% of all the participants were male, compared to 37% female as there were more males in managerial positions than females. However females considered the environment to be more innovative.

Future studies can be conducted to assess the role that females play in the implementation of CE. Therefore research can be done that focuses on management perception of organisational antecedents based on gender only.

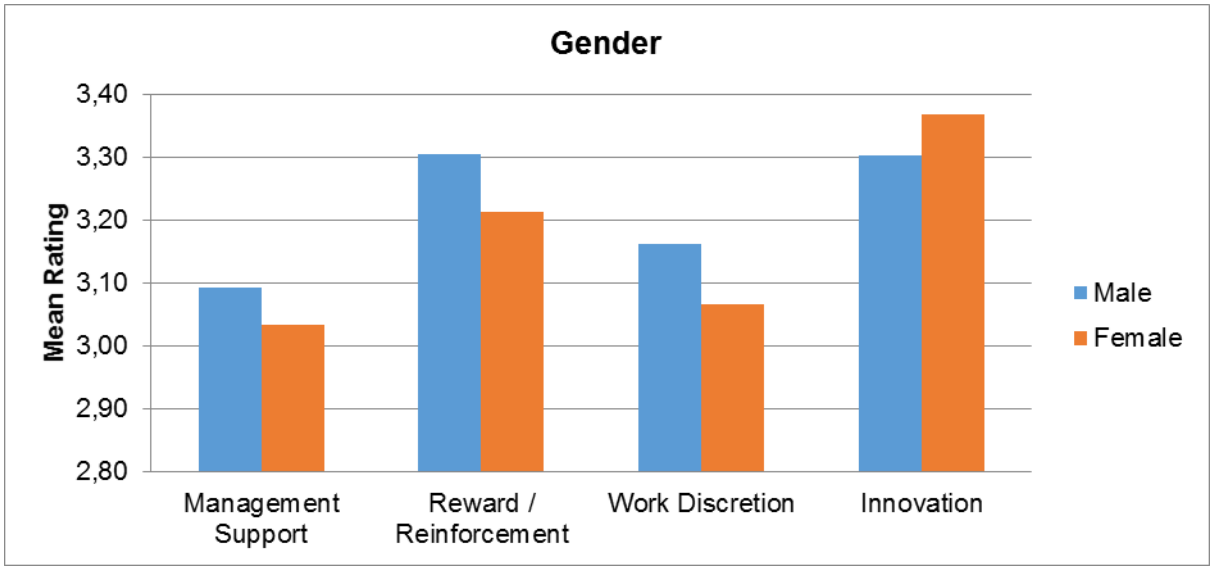


Figure 5.3: Gender Comparison

5.6 Conclusion

Overall results based on the survey conducted in SOEs in Zimbabwe show that changes/innovation has been happening in the entities, but the prerequisite organisational antecedents have not been configured in a way that encourages sustainable entrepreneurial behaviour. Managers in both countries rated management support, reward/reinforcement and work discretion as having a significant relationship with innovation but the organisation was not configuring the antecedents at the level that it encourages sustainable

entrepreneurial behaviour. Perception of these antecedents differed at different management levels, especially for management support but work discretion and reward/reinforcement did not show any variation.

6 CHAPTER : CONCLUSIONS

6.1 Introduction

This final Chapter provides an overall conclusion about the full research, focusing on its relevance, the connection with the literature review and the linkages to the survey results. This is followed by a detailed recommendation based on the gaps identified and any implications. Suggestions for further research are provided.

6.2 Summary of Literature

According to Zahra (2015), corporate entrepreneurship is a means that prompts innovation, bolsters organisations and boosts productivity. Enhancing of performance is achieved by implementation of entrepreneurial processes that enables people to act quickly when opportunities arise by developing new products and services as well as making quick operational decisions. According to Kuratko, Morris and Covin (2008), creation of organisations, change, innovation and wealth will be achieved through entrepreneurship processes. When entrepreneurship is viewed from the public sector on which this study was based, one has to take into account the high risk aversion, political interference, lack of resources, resistance to change, lack of vision and performance accountability that characterises these environment which can impede entrepreneurship (Alvers, 2013). However, entrepreneurship can occur in public enterprises, through downsizing or reducing the size of government, reengineering of processes and procedures, improvement of quality standards for service by ensuring an environment that encourages participative management, bottom up reforms and motivation of its employees (Osborne & Gaebler, 1992).

Taking into consideration the benefits that can be derived from corporate entrepreneurship, Borins (2001; 2002), Guth and Ginsberg (1990), Osborne and Gaebler (1992) and Kearney, Hisrich and Roche (2007) all confirmed that corporate entrepreneurship can be implemented in the public sector despite the obstacles that are faced. They further argued that the public sector did face

a number of external obstacles like political interference, munificence, manipulation by legislators and interest groups. Our research sample of six SOEs also highlighted some of these challenges as many of them have had to go through structural changes in response to these challenges.

The challenges in the public sector to corporate entrepreneurship implementation can be overcome by understanding how internal organisational antecedents like top management support, work discretion or risk orientation, effective reward system, making time available to experiment and pursue innovation, flexibility of boundaries, flexible organisation structure, the culture of organisations, proactiveness are key in the successful implementation of corporate entrepreneurship (Kuratko, Hornsby & Covin, 2008; Shein, 2004; Morris & Kuratko 2002; Hornsby, et al., 1993; 2002; 2009; Covin & Slevin, 1991). The role that is played by managers at different levels i.e. top/senior managers, middle and junior management play has been drawing attention of researchers like Burgelman (1983), Floyd and Woolridge (1992; 1994), Drucker (1985) Hornsby, et al. (2009), to name a few.

Our research findings confirmed the literature review from past researches by Hornsby, et al. (2009), Morris, Kuratko and Morris (2002), and Hisrich and Peters (2002), who have argued that organisation antecedents like management support, work discretion, reward / reinforcement had a positive effect on individuals' tendencies to behave entrepreneurially at different levels of management. The positive relationship that these antecedents have on innovation was identified both in the literature as well as in the results established in this research. Our results showed that there was a significant positive relationship between management support, reward and reinforcement and work discretion and innovation. This confirms past research findings regardless of the sectors in which these researches were conducted.

Taking into consideration challenges that are faced by SOEs, innovation is considered to be key in an effort to turn around these organisations. However innovation will occur if both internal and external antecedents are properly configured. According to Chebet, Tubey & Rotich (2015), innovation can manifest in the public sector through reinvention of government by changing political systems or restructuring to create efficiencies which could result

in reduction of waste, fraud and abuse. Innovation then, is the answer for SOEs in Zimbabwe and South Africa, as there is already a call for them to be transformed. Rusvingo (2014) cited recommendations by Makamure as input to the proposed Public Finance Management Act reforms that call for SOEs in Zimbabwe to be restructured and corporate governance restored, with performance accountability by executives and reviews of the remuneration system. In South Africa, McGregor (2014) called for implementation of the corporate governance model and implementation framework, inspirational leadership, creation of integrity and professionalism. Successful implementation of innovation will be achieved when individuals in these organisations are given freedom to pursue initiatives, despite existing company rules (Kuratko, Hornsby & Covin, 2014). Borins (2001) also emphasised the need to show benefits for innovation to discourage resistance, adoption of accommodating approaches like training and compensation to overcome barriers. Lastly, he recommended that these organisations must have clear vision, resource availability and recognition of participants to encourage innovation.

6.3 Summary of results

The assessment of organisational factors that foster corporate entrepreneurship at SOEs, based on this study, proved that management support encouraged innovation and motivated managers to be entrepreneurial. When this hypothesis was tested with number of new ideas implemented the relationship was found that more new ideas were being implemented where management support which consists of providing resources and encouragement to staff with new ideas was present. When the relationship was moderated with occupational level, our findings confirmed that in an environment where junior managers were given management support they tended to be more innovative. The need for management support was found to be less at senior and middle management levels. This finding was more in line with the previous studies on bottom up innovation by Burgelman (1983; 1984) which emphasised the role of first line managers in a bottom up process of CE.

The relationship between management support and innovation was also found to be strong, confirming current literature. Managers in the SOEs

surveyed, confirmed that rewards would motivate them to be more entrepreneurial. Taking into consideration the current problems faced by the SOEs that were surveyed, putting an integrated management system that rewards employees for being entrepreneurial and driving innovation will go a long way in improving their performance. The results also showed that the need for reward and recognition in these entities did not vary at different management level, but that the need was equally the same as occupational level in our study was found not to moderate the relationship between reward and innovation, nor did it vary when number of projects implemented was considered. These results, which do not support findings from other studies by Hornby, et al. (2002) whose findings seem to place more emphasis on the role of middle managers, is an indication that due to different environments, especially in public sectors where salaries are low and incentives are few, the need for recognition does not vary at different management level. Therefore these entities for now need to focus on ensuring that a reward system that supports innovation is put in place, irrespective of the job level.

In reviewing results found when the relationship between work discretion was tested against innovation and number of projects implemented, again this relationship was found to be positive and significant, which supports previous studies by Hornsby, et al. (2009), Morris, Kuratko and Morris (2002), and Hisrich and Peters (2002) which confirmed that this relationship was positive. However the relationship was not found to differ with managerial level. This could be explained by making an assumption that since the study was in the public sectors in Zimbabwe and South Africa where opposition parties and media has become more critical of lack of delivery, procedures put in place are applicable to all managers at all levels and the need to comply without deviation from rules is great to avoid failure. This stifles creativity as people can only learn from their mistakes.

Research results on level of innovation / corporate entrepreneurship in SOEs in Zimbabwe as compared to South Africa was unexpected. There was an expectation that since South Africa’s economy was doing better than Zimbabwe, with the SOEs having more financial resources to offer better wages and incentives to their staff and funds for innovation projects, South Africa

would have more projects being implemented by the SOEs and management perception of the organisational antecedents would be more positive than that of Zimbabwe. Our findings however showed that Zimbabwe had implemented more innovation projects in the last 12 months, with the managers rating the presence of reward / reinforcement, and work discretion higher than South Africa except for management support and innovation which did not show any significant difference. However, the results need to be viewed with caution as despite the positive signs from Zimbabwe, the actual performance of such institutions was not considered. The main reason to implement corporate entrepreneurship was to enable organisations to cope with today's competitive and uncertain business environment which will result in positive company financial performance (Glaser, Fourne & Elfring, 2015) which is not currently the case in some the SOEs.

6.4 Implications

The study adds to the current literature on innovation and corporate entrepreneurship in the public sector. Of importance to academics and practitioners is more insight into the level of corporate entrepreneurship in Zimbabwe and South African entities. It might also provide insight as to why some SOEs are failing and some are succeeding. What will be of interest are the differences in results found, especially on the issue of the influence of organisational antecedents on the perception of managers at different management levels. The research provides academics with more literature for any research in the public sector or corporate entrepreneurship. It also adds weight to current literature which explores managerial levels and to some extent confirms that managers at different levels play different roles in the implementation of CE. The study also confirmed the validity and reliability of using CEAI to explain entrepreneurial outcomes.

6.5 Limitations

The population of SOEs in Zimbabwe and South Africa had more than 300 entities added together, but the sample used was only from six entities. The

sample size of managers was also small which made it difficult to generalise the results obtained to the whole population. Data collection was also impacted by load shedding. The initial plan was to conduct an on-line survey only but internet connectivity, especially in Zimbabwe, was a challenge as there was load shedding on a daily basis. Most entities in Zimbabwe were going through restructuring or had just come out of a restructuring, therefore the interest to participate was low. Feedback received therefore could have been influenced by the current instability which could have influenced managers' perception negatively. In South Africa, the low response was due to time constraints and survey fatigue as the identified organisations were receiving a lot of requests to complete surveys.

The study only focused on the relationship between management support, reward and work discretion with innovation without consideration of performance. Measures of organisation performance could confirm whether the changes implemented contributed to the organisation bottom line, which would provide a solid significance of the relationship between innovation and organisational factors.

6.6 Recommendations and suggestions for future research

Taking into consideration some of the shortcomings discovered as part of the results and literature review, it is recommended that the following considerations should be taken when implementing corporate entrepreneurship in organisations:

Since the public sector is changing rapidly, both nationally and internationally, it is recommended that energy and passion should drive the creation and implementation of new ideas and creative solutions. Therefore innovation should be treated as a journey not as a linear process with learning and experimentation forming the cornerstone of this journey, irrespective of the outcome (Karyotakis & Moustakis, 2014).

Recommendation for improvement of the public sector in South Africa through transformation, includes the alignment of vision and long term strategies with government, fostering conducive conditions for change. Therefore the

call is a move away from short term sporadic changes to the long term. For innovation to succeed in the public sector the restructuring process must ensure that policies are aligned with operational requirements.

According to McGregor (2014), for corporate entrepreneurship to succeed in the public sector with reference to South African entities, there should be zero tolerance for corrupt practices and financial management standards have to be improved; since competent leaders with the necessary skills are required, government has to move away from political appointments and training of public sector staff should be prioritised to ensure that the entities are run by competent individuals. She also recommended that corporate governance principles and guidelines be instilled in everyone who works in this sector to ensure that everyone knows what acceptable and unacceptable behaviour is.

Based on results obtained, organisations need to ensure that they anticipate change in advance, then commit and design actions around entrepreneurial behaviour and innovation which will enable them to be competitive. The study results indicated the level of organisations' configuration of organisational factors that fosters entrepreneurship was low in all six entities under study; when they restructure their organisation, their first focus should be on implementing strategies that encourage entrepreneurial behaviour. Competitive advantage will be gained if management commit to championing innovation by providing required resources as managerial support was found to have a positive relationship with innovation. This support for South African SOEs was found to be low. They also have to ensure that an integrated reward system is put in place, which rewards the right behaviour and entrepreneurial actions. Once again, this aspect although it was found to be present in the SOEs, responses indicated that it was low.

With regards to Zimbabwe SOEs, the government is recommended to do away with hierarchical and centralised bureaucracies, which are a misfit in the ever changing technologically advanced society. The recommendation according to Turbey, Chebet and Rotich (2015) is to create institutions that are flexible and adaptable, that are sensitive to the needs of their customers, which give its employees a sense of meaning, control, and empowerment, thereby providing world class services. In the context of Zimbabwe, this can only be achieved

if the Minister of Finance fully implements the changes to the Public Finance Management Act, which is aimed at improving corporate governance by ensuring that resources are deployed in priority areas, not at the expense of service, ensuring that funds are utilised in a transparent, prudent and economical manner (Rusvingo, 2014). There is also emphasis on reviewing the penalties in the current act to ensure that the looting and corruption that had become synonymous with Zimbabwe SOEs can be stopped as offenders can be brought to book. According to Rusvingo (2014), the proposed changes will ensure that performance measures are implemented and that Boards and the Executives' performance will be monitored and reviewed by the Parliamentary Portfolio Committee and that management should be held accountable for poor performance from their entities.

Thus SOEs need to implement corporate entrepreneurship as the current results coming from both South Africa and Zimbabwe are discouraging. There is a need to reinvent government by replacing bureaucratic organisations and behaviours with entrepreneurial organisations as recommended by Osborne and Gaebler (1992), as well as getting rid of inhibitors of innovation by understanding them and circumventing them through the application of tactical approaches as recommended by Borins (2000; 2001). Finally, to be effective it is recommended that SOEs adopt the recommendations by Osborne and Gaebler (1992) to allow them to be entrepreneurial, which include, the introduction of competition, focusing on outcomes, be customer oriented, generation of revenue through user – free structures, decentralisation, collaboration with the private sector and management of both supply and demand.

The final recommendations require SOEs in the two countries to understand internal factors that inhibit CE and ensure that they are overcome by ensuring that the organisational antecedents that promote entrepreneurial behaviour are properly configured. These include the requirement that top management nurtures entrepreneurial behaviour by championing innovative ideas as it has been proven that there is a positive relationship between management support and number of innovation ideas implemented. Provide work discretion especially the encouragement of staff to look for opportunities and implement

them without fear of reprisal if they fail and giving them authority and autonomy without excessive oversight. The rewards and reinforcement do not only have to be provided in monetary terms, but the organisation can consider creative ways as recommended by Borins (2001), whereby awards such as gain sharing, establishment of department innovation awards which allow staff to be recognised in front of their peers or be named in local papers for any innovation success are suggested. However, any rewards given should be linked to performance and should be perceived by the recipients to be fair and equitable to performance. Any integrated reward system should be considered.

Time availability in the form of work schedules that allow for time and space to pursue entrepreneurial opportunities has to be provided, organisational boundaries which require a free flow of information in various departments need to be set up, a flexible and adaptable structure is recommended with an organisational culture that encourages shared values, assumptions, beliefs and norms. Risk taking and proactiveness will be key for effective organisational internal factors that encourage entrepreneurship.

Finally, key to all the internal factors is the need to understand the roles that each management level play in the entrepreneurial implementation process. Several studies have already highlighted the need to have an in-depth understanding of this aspect. Taking all the above aspects into consideration it is the researcher's belief that government and policy makers can use the information provided in this research to enhance the performance of SOEs. The body of evidence can also be used in the set up stages of SOEs.

6.7 Conclusion

Internal organisation factors and their influence on CE have been gaining a lot of relevancy as they affect the nature of the organisation's internal environment, with a number of studies having been conducted by researchers, such as Kuratko, et al. (2001) and Hornsby, et al. (2000; 2009) on reward /reinforcement, Kuratko, et al. (1993; 2001), Lyon, Lumpkin and Dess (2000) and Morris and Kuratko (2002) on management support and Burgelman (1983), Morris and Kuratko (2002) and Hornsby, et al. (1999; 2002) on work

discretion, to name a few. These factors have been found individually or in combination to be key antecedents that influence entrepreneurial actions for CE. According to Hornsby, et al. (2001) a supportive internal environment for innovation will nurture strong antecedents of entrepreneurial actions.

Taking into consideration the current performance of SOEs in Zimbabwe and South Africa and the reasons for some of their failings, corporate entrepreneurship and the nurturing of organisational factors can be argued to be key in turning around the performance of these entities. Despite arguments that public entities cannot be entrepreneurial and innovative, several studies, with specific relevancy to Borins (2001)'s study, have shown how corporate entrepreneurship is as applicable to the public sector as it is to the private sector notwithstanding the differences in challenges that both sectors face in its application.

The call to reform SOEs has been echoed in both South Africa and Zimbabwe as the central governments are finding it more and more difficult to keep bailing out failing entities. The pressure to direct government funds towards critical social challenges is putting pressure on SOEs to be self-sustaining. Results of this research, supported by other studies, has highlighted the importance of firms supporting internal organisational factors for them to remain competitive. The level of such support has been shown to be low in this study. However this does not take away but further highlights the importance of a positive relationship between internal organisational factors and innovation. Of critical importance is the role that managers play and the notion that they will only engage in entrepreneurial actions when organisational antecedents for such actions exist and they recognise their existence (Kuratko, et al., 2005).

REFERENCES

Alberti, A., & Bertucci, G. (2006). *Replicating innovations in governance: an overview. Innovations in governance and public administration: replicating what works.* New York: United Nations Publication.

Antoncic, B., & Scarlat, C. (2005). *Corporate entrepreneurship and organizational performance: A comparison between Slovenia and Romania.* In Proceedings of the 6th international conference of the faculty of management Koper Congress Centre Bernardin, Slovenia, November, 71 (Vol. 89).

Barringer, B. R., & Bluedorn, A. C. (1999). The relationship between corporate entrepreneurship and strategic management. *Strategic Management Journal, 20(5), 421-444.*

Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press; Collier Macmillan.

Barrett, H., Balloun, J. L., & Weinstein, A. (2012). Creative climate: a critical success factor for 21st century organisations. *International Journal of Business Innovation and Research*, *6*(2), 202-219.

Baum, J. R., Locke, E. A., & Smith, K. G. (2001). A multidimensional model of venture growth. *Academy of management journal*, *44*(2), 292-303.

Bellone, C. J., & Goerl, G. F. (1992). Reconciling public entrepreneurship and democracy. *Public Administration Review*, 130-134.

Bianchi, T. (2001). With and without co-operation: two alternative strategies in the food- processing industry in the Italian South*, Entrepreneurship & Regional Development*, 13: 117–145.

Block, Z., & MacMillan, I. (1993). Corporate venturing: Creating new businesses with the firm. Boston (Massachusetts: Harvard Business School Press.

Bourdieu, P. (1986). The forms of capital. In J. Richardson (Ed.) *Handbook of Theory and Research for the Sociology of Education*. New York, Greenwood,

241-258.

Borins, S. (2002). Leadership and innovation in the public sector. *Leadership & Organization Development Journal*, *23*(8), 467-476.

Borins, S. (2001). *The challenge of innovating in government*. Arlington, VA: PricewaterhouseCoopers Endowment for the Business of Government, 1-46.

Boyne, G. (2002). Public and private management: what's the difference? *Journal of management studies*, *39*, 97-122.

Burgelman, R. A. (1983). A model of the interaction of strategic behaviour, corporate context, and the concept of strategy. *Academy of management Review*, *8*(1), 61-70.

Burgelman, R. A. (1983). Corporate entrepreneurship and strategic management: Insights from a process study. *Management science*, *29*(12), 1349-1364.

BusinessDictionary.(2015).online:http://www.businessdictionary.com/definition/correlation analysis-RA.html. Business Dictionary. Accessed 2nd January 2016 .

Capobianco, A., & Christiansen, H. (2011). *Competitive neutrality and state-owned enterprises: challenges and policy options*. OECD Corporate Governance Working Papers, (1), 1.Paris: OECD.

Centre for Public Service Innovation. (2007). *Draft Innovation Framework for the Public Sector of SA:*
http://www.dcs.gov.za/innovation/documents/DocumentLibrary/CPSI/Draft-Innovation-Framework-For-The-Public-Sector-Of-SA.pdf. Accessed on 13 December, 2015.

Chavhunduka, D., Fauzi, R., Sifile, O., Muranda, Z., Mabvure, T. J., & Dandira, M. (2014). Antecedents for effective management of public enterprise restructuring in Zimbabwe. *International Journal of Business & Management.* 2(10), 105-113.

Chebet, W. T., & Rotich, J. K. (2015). Re-engineering the public sector: integration of innovation and entrepreneurship in Africa's

development agenda. *European Journal of Business Economics and Accountancy*, 3(5), 2056-6018.

Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of business venturing*, *13*(4), 295-316.

Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational research methods*, *4*(1), 62-83.

Chigudu, D. (2015). Towards Improvement of Ethics in the Public Sector in Zimbabwe. *Journal of Governance and Regulation,* 4(1), 103-111.

Cockayne, R. (2014). *Regulator put under administration for 'creative' use of R400m without consent.* http://www.iol.co.za/business/news/regulator-put-under-administration-for-creative-use-of-r400m-without-consent-1.1734453

Cooper, D. R., & Schindler, P. S (2014). *Business Research Methods*. 12th Ed. New York: McGraw Hill.

Covin, J. G., & Miles, M. P. (1999). Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship: Theory and practice*, *23*(3), 47-47.

Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behaviour. *Entrepreneurship: Critical perspectives on business and management*, *3*. London: Routledge.

Covin, J. G., & Slevin, D. P. (2002). The entrepreneurial imperatives of strategic leadership. *Strategic entrepreneurship: Creating a new mindset*, 309-327. New York: Wiley.

Chronicle (2015). *Air Zim seeks $600m bailout*. http://www.chronicle.co.zw/air-zim-seeks-600m-bailout/, Accessed January, 18, 2015.

Creswell, J. (2002). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*; Upper Saddle River, NJ: Merrill Prentice.

Creswell, J. W. (2003). *Research design*. *Qualitative, quantitative and*

mixed methods approaches. 2nd ed. Thousand Oaks, CA: Sage.

Damanpour, F. (1991). Organisational Innovation: A Meta-Analysis of Determinants and Moderators. *Academy of Management Journal, 34.*355-390.

Davidsson, P., & Honig, B (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing 18(3).301-331.*

Deming, W. E. (1990). *Sample design in business research* (Vol. 23). New York: John Wiley & Sons.

Department of Human Settlements (2014). *Department of Human Settlements entities on their mandate, annual performance plans and budget for 2014/15*. https://pmg.org.za/committee-meeting/17592/. Accessed 29th December , 2015

Department of Labour (2015). *Annual report*. http://www.labour.gov.za/DOL/downloads/documents/annual-reports/employment-equity/2014-2015/15th%20CEE%20Annual%20Report%202015.pdf. Accessed January 20, 2015

Department of Public Enterprise, South Africa: http://www.cyclopaedia.info/wiki/Department-of-Public-Enterprises-(South-Africa). Accessed 9th September, 2015

Desson, K. (2004). *Achieving Organisational Change: The Importance of Organisational Culture*. Ottawa: Pentor Communication.

Drucker, P.F. (1995) "Really Reinventing Government," *The Atlantic Monthly,* February, 49-61.

Ensor, L. (2014). *SA's 'state-owned enterprises situation of serious concern'*. http://www.bdlive.co.za/business/2014/12/04/sas-state-owned-enterprises-situation-of-serious-concern. Accessed 25th December 2015.

Estate Agency Affairs Board. (2016). http://www.eaab.org.za/. Accessed 20th December, 2015.

Financial Gazette. (2016). *Another ZESA scandal*. http://www.financialgazette.co.zw/another-zesa-scandal/. Accessed 13th December, 2015.

Financial Gazette. (2016). *NSSA top executives fired*. http://www.financialgazette.co.zw/nssa-boss-matiza-fired/. Accessed 13th December, 2015.

Floyd, S. W., & Lane, P. J. (2000). Strategizing throughout the organization: Managing role conflict in strategic renewal. *Academy of management review*, *25*(1), 154-177.

Ford Foundation (1996) *Innovations in American government.* New York: Ford Foundation.

Ghauri, P. N., & Grønhaug, K. (2005). *Research methods in business studies: A practical guide*. Engelwood Cliffs, VT: Pearson Education.

Ginsberg, A. (1988). Measuring and modelling changes in strategy: Theoretical foundations and empirical directions. *Strategic Management Journal,* 9(6), 559-575.

Glaser, L., Fourné, S. P., & Elfring, T. (2015). Achieving strategic renewal: the multi-level influences of top and middle managers' boundary-spanning. *Small Business Economics*, 1-23.

Goodsell, C. T., Osbome, D., & Gaebler, T. (1993). Reinvent government or rediscover it? *Public Administration Review*, 53(1), 85-87.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm, *Strategic Management Journal*, 17, 109-122.

Gratton, L., & Ghoshal, S. (2003). Managing Personal Human Capital: New Ethos for the 'Volunteer' Employee. *European Management Journal*, *21*(1), 1-10.

Groenewald, D. (2010). *Assessment of corporate entrepreneurship and the levels of innovation in the South African short-term insurance industry*. Unpublished DPhil thesis. Pretoria: University of Pretoria.

http://repository.up.ac.za/bitstream/handle/2263/24190/02chapters3-4.pdf?sequence=3. Accessed 13th December 2015.

Groenewald, D., & Jansen van Vuuren, J. (2011). Conducting a corporate entrepreneurial health audit in South African short term insurance businesses. *Journal of Contemporary Management*, *8*, 1-33.

Guth, W. D., & Ginsberg, A. (1990). Guest editors' introduction: Corporate entrepreneurship. *Strategic management journal*, *11*(4), 5-15.

Guth, W. D., & MacMillan, I. C. (1986). Strategy implementation versus middle management self-interest. *Strategic Management Journal*, *7*(4), 313-327.

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of management review*, *9*(2), 193-206.'

Hambrick, D. C., & Finkelstein, S. (1987). Managerial discretion: A bridge between polar views of organizational outcomes. *Research in organizational behaviour,* 9(369-406).

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

Heller, T. (1999). Loosely coupled systems for corporate entrepreneurship: imagining and managing the innovation project/host organization interface. *Entrepreneurship: Theory and Practice*, *24*(2), 25-25.

Higgins, J. (2005). The Correlation Coefficient. *The Radical Statistician*, 1-26.

Hirsrich, R., & Peters, M.P. (2007). *Entrepreneurship: Starting, developing and managing a new enterprise.* 7th ed*.,* Chicago, IL: Irwin.

Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. (2001). Strategic entrepreneurship: Entrepreneurial strategies for wealth creation. *Strategic management journal*, *22*(6-7), 479-491.

Holton, E. H., & Burnett, M. B. (1997). *Qualitative research methods*. *Human resource development research handbook: Linking research and*

practice. San Francisco: Berrett-Koehler Publishers.

Hornsby, J. S., Kuratko, D. F., & 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.

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

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

Hornsby, J. S., Kuratko, D. F., Shepherd, D. A., & Bott, J. P. (2009). Managers' corporate entrepreneurial actions: Examining perception and position. *Journal of Business Venturing*, *24*(3), 236-247.

Hope Sr, K. R., & Chikulo, B. C. (2000). Decentralization, the new public management, and the changing role of the public sector in Africa. *Public Management an International Journal of Research and Theory*, *2*(1), 25-42.

Hoskisson, R. E., Hitt, M. A. and Ireland, R. D. (2008) *Competing for Advantage,* 2nd ed. Cincinnati: Thomson South-Western.

Huseman, R. C., Hatfield, J. D., & Miles, E. W. (1987). A new perspective on equity theory: The equity sensitivity construct. *Academy of management Review*, *12*(2), 222-234.

Industrial Development Corporation (2015). IDC to channel R23bn to black industrialists. Available at: http://www.idc.co.za/home/media-room/articles/822-idc-to-channel-r23bn-black-industrialists.html. Accessed on: 13th December 2015.

Institute of Internal Auditors (2011). *Supplemental guidance: public sector definition.* https://na.theiia.org/standards-guidance/Public%20Documents/Public%20Sector%20Definition.pdf, Accessed Janury19, 2015.

Ireland, R. D., Kuratko, D. F., & Morris, M. H. (2006). A health audit for corporate entrepreneurship: innovation at all levels: part I. *Journal of Business Strategy*, *27*(1), 10-17.

Jaworski, B. J., & Kohli, A. K. (1996). Market orientation: review, refinement, and roadmap. *Journal of Market-Focused Management*, *1*, 119-135.

Karyotakis, K. M., Bakatsaki, M., & Moustakis, V. S. (2015*). The entrepreneurial facets of public administration.* International Scientific Conference of IT and Business Related Research, At Belgrade, Serbia.

Kearney, C., Hisrich, R., & Roche, F. (2007). Facilitating public sector corporate entrepreneurship process: a conceptual model. *Journal of Enterprising Culture*, *15*(03), 275-299.

Kearney, C., Hisrich, R., & Roche, F. (2008). A conceptual model of public sector corporate entrepreneurship. *International Entrepreneurship and Management Journal*, *4*(3), 295-313.

King, A. W., Fowler, S. W., & Zeithaml, C. P. (2001). Managing organizational competencies for competitive advantage: The middle-management edge. *The Academy of Management Executive*, *15*(2), 95-106.

Kirzner, I. (1979). *Perception, opportunity, and entrepreneurship*. New York: Academic Press.

Kloppers, E. (2011). EAAB's shocking maladministration. http://www.fin24.com/Companies/Property/EAABs-shocking-maladministration-20110904 . Accessed 29th December , 2015

Knight, R. M. (1986). Corporate innovation and entrepreneurship in Canada. *Journal of Product Innovation and Management*, 4(4), 284-297.

Kotrlik, J. W. K. J. W., & Higgins, C. C. H. C. C. (2001). Organizational research: Determining appropriate sample size in survey research appropriate sample size in survey research. *Information technology, learning, and performance journal*, *19*(1), 43.

Kraut, A. I., Pedigo, P. R., McKenna, D. D., & Dunnette, M. D. (2005). The

role of the manager: What's really important in different management jobs? *The Academy of Management Executive*, *19*(4), 122-129.

Kuratko, D. F., Hornsby, J. S., & Covin, J. G. (2014). Diagnosing a firm's internal environment for corporate entrepreneurship. *Business Horizons*, *57*(1), 37-47.

Kuratko, D. F., & Audretsch, D. B. (2013). Clarifying the domains of corporate entrepreneurship. *International Entrepreneurship and Management Journal*, *9*(3), 323-335.

Kuratko, D. Morris, M., & Covin, J. (2008). *Corporate Innovation and Entrepreneurship.* 3rd ed. New York: Cengage.

Kuratko, D. F., Ireland, R. D., Covin, J. G., & Hornsby, J. S. (2005). A Model of Middle-Level Managers' Entrepreneurial Behaviour. *Entrepreneurship theory and practice*, *29*(6), 699-716.

Kuratko, D. F., Hornsby, J. S., & Bishop, J. W. (2005). Managers' corporate entrepreneurial actions and job satisfaction. *The International Entrepreneurship and Management Journal*, *1*(3), 275-291.

Kuratko, D. F. (2005). The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship theory and practice*, *29*(5), 577-598.

Kuratko, D. F., Hornsby, J. S., & Goldsby, M. G. (2004). Sustaining corporate entrepreneurship: modelling perceived implementation and outcome comparisons at organizational and individual levels. *The International Journal of Entrepreneurship and Innovation*, *5*(2), 77-89.

Kuratko, D. F., Ireland, R. D., & Hornsby, J. S. (2004). Corporate entrepreneurship behaviour among managers: a review of theory, research, and practice. *Advances in Entrepreneurship, Firm Emergence and Growth*, *7*(04), 7-45.

Kuratko, D. F., Montagno, R. V., & Hornsby, J. S. (1990). Developing an entrepreneurial assessment instrument for an effective corporate

entrepreneurial environment. *Strategic management journal*, *11*, 49-58.

Larbi, G. A. (1999). *The new public management approach and crisis states*. Paper no 112, p1012-6511. New York: The United Nations Research Institute for social development.

Laerd Statistics (2015). *Descriptive inferential statistics*. Online https://statistics.laerd.com/statistical-guides/descriptive-inferential-statistics.php. Accessed 24th December, 2015

Lee, G.J. (2015). *Business Statistics Made Easy in SAS*. Johannesburg: Silk Route Press.

Levine, C. H., Backoff, R. W., Cahoon, A. R., & Siffin, W. J. (1975). Organizational Design: A Post Minnowbrook Perspective for the" New" Public Administration. *Public Administration Review*, 425-435.

Legge, J., & Hindle, K. (1997*). Entrepreneurship: How innovators create the future.* Melbourne: Macmillan Education AU.

Lewis, E., Rickover, H., Hoover, J. E., & Moses, R. (1980). *Public entrepreneurship: Toward a theory of bureaucratic political power* (Vol. 9). Bloomington: Indiana University Press.

Lau, C. M., & Woodman, R. W. (1995). Understanding organizational change: A schematic perspective. *Academy of Management journal*, *38*(2), 537-554.

Linyiru, B.M., Karanja. K. & Gichira.R (2015). Influence of Corporate Entrepreneurship on performance of state corporations in Kenya. *Prime Journal of Social Science,* 4(1), 953-957.

LoBiondo-Wood, G., Haber, J., Berry, C., & Yost, J. (2013). *Study Guide for Nursing Research: Methods and Critical Appraisal for Evidence-based Practice*. 8th ed. Austen, Tx: Mosby Elsevier Health Sciences.

Lumpkin, G.T & Dess, Gregory, G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *The Academy of management review*. Vol 21 no 135- 160

Makamure, J. (2014, September 26). *Changes to the Act alone will not address rot in public enterprises.* Newday, p. 15

Mapetere, D., Mavhiki, S., Nyamwanza, T., Sikomwe, S., & Mhonde, C. (2012). Strategic role of leadership in strategy implementation in Zimbabwe's state owned enterprises. *International Journal of Business and Social Science*, *3*(16), 271-276.

McGregor, L. (2014.). *Can South African State Owned Companies succeed?* https://www.google.co.za/#q=can+south+africa+state+owned+companies+succeed. Accessed 25th December 2015.

McGregor, L. (2014) *Improving Corporate Governance of South African State Owned Companies (SOCs).* CC Convivium, published for Hans Siedel Foundation.

Miller, A., & Camp, B. (1986). Exploring determinants of success in corporate ventures. *Journal of Business Venturing*, *1*(1), 87-105.

Miller, D., & Friesen, P. H. (1982). Innovation in conservative and entrepreneurial firms: Two models of strategic momentum. *Strategic management journal*, *3*(1), 1-25.

Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management science*, *29*(7), 770-791.

Mitchell, T. R., & Scott, W. G. (1987). Leadership failures, the distrusting public, and prospects of the administrative state. *Public Administration Review*, 445-452.

Morris, M. H., & Jones, F. F. (1999). Entrepreneurship in established organizations: The case of the public sector. *Entrepreneurship: Theory and Practice*, *24*(1), 71-71.

Morris, M. H., & Kuratko, D. F. (2002). *Corporate entrepreneurship: Entrepreneurial development within organizations*. Cincinatti: South-Western

Pub.

Morris, M. H., Kuratko, D. F. & Coven, J. G. (2011). *Corporate Entrepreneurship and innovation.* 3rd ed. Boston: Cengage/ South western

Morris, M., Kuratko, D., & Covin, J. (2010). *Corporate entrepreneurship & innovation.* Boston: Cengage Learning.

Moroz, P. W., & Hindle, K. (2012). Entrepreneurship as a process: Toward harmonizing multiple perspectives. *Entrepreneurship Theory and Practice*, *36*(4), 781-818.

Mpofu, B (2014). *NetOne seeks $570 million, pines for strategic investor*. http://source.co.zw/2014/06/NetOne-seeks-570-million-pines-for-strategic-investor/. Accessed December 29, 2015.

National Department of Treasury of South Africa (2015). http://www.treasury.gov.za/. Accessed 9 July 2015.

National Social Security Authority (2012). *Construction of $6,5 million Chipinge shopping mall commences.* http://www.nssa.org.zw/index.php/2012-07-16-09-05-00/news/67-construction-of-6-5-million-chipinge-shopping-mall-commences. Accessed 20th December, 2015.

National Social Security Authority (2015). http://www.nssa.org.zw/index.php/about-nssa. Accessed 15th December , 2015

Nayyar, J. & Mahmood. R (2014). The Effects of Corporate Entrepreneurship Determinants on Performance of Public Higher Education Institutions in Pakistan. *Business & Entrepreneurship Journal*, 3(1).

NetOne (2015). *Chipinge base station launch*. http://www.NetOne.co.zw/?p=1251. Accessed December 29, 2015

Newsday (2015). *NetOne on restructuring exercise.* https://www.newsday.co.zw/2015/10/13/NetOne-on-restructuring-exercise/. Accessed 26th December, 2015.

Nielson, R. P., Peters, M. P., & Hisrich. R. D. (1985).

Entrepreneurship strategy for internal markets— Corporate, non-profit and government institution cases. *Strategic Management Journal. 6(2),* 181-189.

Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford: Oxford University Press.

Nutt, P. C. (2006). Comparing public and private sector decision-making practices. *Journal of Public Administration Research and Theory*, *16*(2), 289-318.

Nutt, P. C., & Backoff, R. W. (1993). Transforming public organizations with strategic management and strategic leadership. *Journal of Management*, *19*(2), 299-347.

Osborne, D., & Gaebler, T. (1992). *Reinventing government: How the entrepreneurial spirit is transforming government*. Reading Mass.L Addison Wesley.

Quinn, J. (1985). Managing Innovation: Controlled Chaos. *Harvard Business Review,* 73-84.

Peled, A. (2001). Network, coalition and institution-The politics of technological innovation in the public sector. *Information Technology & People*, *14*(2), 184-205.

Peteraf, M. A. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic management journal*, *14*(3), 179-191.

Phan, P. H., Wright, M., Ucbasaran, D., & Tan, W. L. (2009). Corporate entrepreneurship: Current research and future directions. *Journal of Business Venturing*, *24*(3), 197-205.

Pollitt, C. (1990). *Managerialism and the public services: The Anglo-American experience*. Oxford: Basil Blackwell.

Polidano, C. (1999). *The new public management in developing countries*. Manchester: Institute for Development Policy and Management, University of

Manchester.

Porter, M. E., & Stern, S. (2001). National innovative capacity. *The global competitiveness report*, *2002*, 102-118.

President of South Africa. (2015). *Presidential review committee on State Owned Enterprises.* Volumes 2 and 3. http://www.thepresidency.gov.za/electronicreport/downloads/volume_3/discussion_papers-edited_by_expert_writer/Draft_Restructuring%20of%20SOE%20in%20South%20Africa.pdf. Accessed 25th December 2015.

Rainey, H. G. (2009). *Understanding and managing public organizations*. New York: John Wiley & Sons.

Rainey, H. G., Backoff, R. W., & Levine, C. H. (1976). Comparing public and private organisations. *Public administration review, 233-244.*

Ramamurti, R. (1986). Public Entrepreneurship: Who they are and how they operate. *California Management Review*. 3, 28. 142-158.

Ramanadham, V. V. (1989). *Privatisation in developing countries*. London: Routledge.

Republic of South Africa (1940). *Industrial Development Corporation Act, No 22, of 1940*: http://www.economic.gov.za/communications/bills/537-industrial-development-corporation-act/download. Accessed 11th December, 2015.

Resnick, D.B. (2015). *What is ethics in research and why is it important?* http://www.niehs.nih.gov/research/resources/bioethics/whatis/

Rhinehart, J.B., Barret, R. P., DeWolfe, S.A., Griffin, J.E., & Spencer, F.E (1969). Comparative study of need satisfaction in government and business hierarchies. *Journal* of *Applied Psychology, 53,* 230-235.

Russell, R. D. (1999). Developing a process model of intrapreneurial systems: A cognitive mapping approach. *Entrepreneurship: Theory and Practice*, *23*(3), 65-65.

Rusvingo, S. L. (2014). The Salary gate Scandal in the Zimbabwe Parastatals Sector: Another Dark side of the Nation (2013–2014). *Global Journal of Management And Business Research*, *14*(10), unpaged.

Sathe, V. (1989). Fostering entrepreneurship in the large, diversified firm. *Organizational Dynamics*, *18*(1), 20-32.

Sadler, R. J. (2000). Corporate entrepreneurship in the public sector: the dance of the chameleon. *Australian Journal of Public Administration*, *59*(2), 25-43.

Schein, E. H. (2004). *Organisational Culture*. WP 2088-88. Sloan School of Management Working Paper, Massachusetts Institute of Technology.

Schumpeter, J. A. (1950). The march into socialism. *The American Economic Review*, 446-456.

Schumpeter, J. A. (1947). The creative response in economic history. *The journal of economic history*, *7*(02), 149-159.

Schumpeter, J.A. (1943). *Capitalism, socialism and democracy*, 6th. ed. . London: Unwin Paperbacks.

Shane, S. & Venkataraman, S (2000). The Promise of Entrepreneurship as a Field of Research, *Academy of Management* Review, 25(1), 217-226.

Sharma. P., & Chrisman, J.J. (1999). Towards a reconciliation of the definitional issues in the field of corporate entrepreneurship. *Entrepreneurship Theory and Practice, 23(3),* 11-27.

South Africa's credit rating revised lower (2015). https://www.enca.com/money/south-africas-credit-rating-revised-lower: Accessed 23rd December 2015.

Southern Eye (n.d.) Zimbabwe's electricity transmission and distribution company: ZETDC. http://www.southerneye.co.zw/tag/zimbabwe-electricity-transmission-and-distribution-company-zetdc. Accessed 20th December, 2015.

Spence, W. R. (1994). *Innovation*. *The communication of change in ideas, practice and products.* New York: Barnes and Noble.

Stevenson, H., & Jarillo, J.C. (1986). Preserving Entrepreneurship as Companies Grow. *Journal of Business Strategy* (summer): 10.

Stevenson, H., & Jarillo, J.C. (1990). A paradigm of entrepreneurship: Entrepreneurial management. *Strategic Management Journal. 11,* 17-27

Stopford, J. M., & Baden-Fuller, C. W. (1994). Creating corporate entrepreneurship. *Strategic management journal*, *15*(7), 521-536.

Sunday News (2015). *NSSA dirty deals exposed*. http://www.sundaynews.co.zw/nssa-dirty-deals-exposed/ Accessed 26th December, 2015.

Telecommpaper (2011). *NetOne launches USD 45 mln web and switch centre in Bulawayo.* http://www.telecompaper.com/news/NetOne-launches-usd-45-mln-web-and-switch-centre-in-bulawayo--844194. Accessed December 29, 2015

Teske, P. & Scheider, M. (1994). "The bureaucratic entrepreneur: the case of city manager" Public Administration Review, 54 (4). 331-341.

Therin, F (2007). *Handbook of Research on Techno-Entrepreneurship*. Cheltenham: Edgar Elgar.

Times Live (2015). *DA rejects sky-high R5 million SAA bailout*. http://www.timeslive.co.za/politics/2015/11/18/DA-rejects-sky-high-R5-billion-SAA-bailout, Accessed January 18, 2015

Tseng, C. Y., Kuo, H. Y., & Chou, S. S. (2008). Configuration of innovation and performance in the service industry: evidence from the Taiwanese hotel industry. *The Service Industries Journal*, 28(7), 1015-1028.

Tsui, A. S., Pearce, J. L., Porter, L. W., & Tripoli, A. M. (1997). Alternative approaches to the employee-organization relationship: does investment in

employees pay off?. *Academy of Management journal*, *40*(5), 1089-1121.

Tushman, M. L., Newman, W. H., & Romanelli, E. (1986). Convergence and upheaval: Managing the unsteady pace of organizational evolution. *California Management Review*, *29*(1), 29-44.

Vesper, K. (1990). *New venture strategies* Rev.ed. Englewood Cliffs, NJ: Prentice-Hall.

Venter, R., Urban, B., & Rwigema, H. (2008). *Entrepreneurship theory in practice.* 2nd ed. Cape Town: Oxford Southern Africa.

Wiklund, J. & Shepherd, D.A. (2003). Aspiring for and achieving growth: the moderating role of resources and opportunities. *Journal of Management Studies 40 (8)*, 1919–1942

Windrum, P. (2008). *Innovation and entrepreneurship in public services. Innovation in public sector services: entrepreneurship, creativity and management.* Cheltenham: Edgar Elgar.

World Bank. (2016). *Doing Business 2016: Measuring Regulatory Quality and Efficiency.* Washington, DC: World Bank Group. http://www.doingbusiness.org/Reports/Subnational-Reports/~/media/giawb/doing%20business/documents/profiles/country/ZAF.pdf. Accessed 26th December, 2015

Yeung, R. L. (2005). Public enterprise governance: KCR Corporation and its governance controversies. *Public Management Review*, *7*(4), 565-587.

Zahra, S. A. (2015). Corporate entrepreneurship as knowledge creation and conversion: The role of entrepreneurial hubs. *Small Business Economics*, *44*(4), 727-735.

Zahra, S. A. (1991). Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. *Journal of business venturing*, *6*(4), 259-285.

Zahra, S. A. (1993). A conceptual model of entrepreneurship as firm behaviour:

A critique and extension. *Entrepreneurship theory and practice*, *17*, 5-5.

Zahra. S. A. (1996). Governance, ownership, and corporate entrepreneurship: The moderating impact of industrial technological opportunities. *Academy of Management Journal, 39 (6)*. 1713-1735

Zahra, S. A., Neubaum, D. O., & Huse, M. (2000). Entrepreneurship in medium-size companies: Exploring the effects of ownership and governance systems. *Journal of management*, *26*(5), 947-976.

Zahra, S. A., & Covin, J. G. (1995). Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. *Journal of business venturing*, *10*(1), 43-58.

Zarutskie, R. (2008). *The role of human capital in venture capital*. Available at SSRN 1726038. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1726038.

Zellweger, T., Sieger, P., & Halter, F. (2011). Should I stay or should I go? Career choice intentions of students with family business background. *Journal of Business Venturing*, *26*(5), 521-536.

Zerbinati, S., & Souitaris, V. (2005). Entrepreneurship in the public sector: a framework of analysis in European local governments. *Entrepreneurship & Regional Development*,17(1), 43-64.

Zhou, G. (2012). Three Decades of Public Expenditure Management in Zimbabwe. *Journal of Public Administration and Governance*, *2*(3), 33-54.

Zhou, G. (2012). Three Decades of Public Enterprise Restructuring in Zimbabwe a will-Of-The-Wisp Chase? *International Journal of Humanities and Social Science*, *2*(20).

Zhou, G. (2001). From interventionism to market-based management approaches: the Zimbabwean experience. *Zambezia,* 28(2), 229-261.

Zimbabwe's unemployment rate is 5.42 percent, the United Nations said on Tuesday (2015). http://www.timeslive.co.za/africa/2015/01/20/zimbabwe-

unemployment-at-5.42-un Accessed 24th December 2015.

Zimbabwe Programme for Economic and Social Transformation (1996-2000) Harare: Gvt. Printers.

Can SA conjure 100 Black Industrialists? http://www.financialmail.co.za/specialreports/rankings/2015/06/28/fm-top-20-companies. Accessed 11th December 2015

APPENDIX A: CONSENT FORM

The Graduate School of Business Administration

2 St David's Place, Parktown,

Johannesburg, 2193,
South Africa
PO Box 98, WITS, 2050
Website: www.wbs.ac.za

MM RESEARCH CONSENT FORM

Masters in Entrepreneurship and Venture Creation

Corporate Entrepreneurship in State Owned Entities

INFORMATION SHEET AND CONSENT FORM

Hello, I am Diana Musara. I am conducting research for the purpose of completing my Masters in Entrepreneurship and Venture Creation at Wits Business School.

What I am doing

I am conducting research on the practice of Corporate Entrepreneurship in State Owned Entities/ Public Entities with special focus on how internal organisational factors encourages innovation. The research is aimed at establishing the main factors that contributes to companies staying afloat during tough times or competition thereby contributing positively to the company bottom line. Researchers in both public and private sectors have established that companies like Apple and Google to name a few have made it to the top and survived tough competition by configuring their internal factors like **management support** to innovation, implementation of **reward systems** that rewards staff for coming up with innovative ideas , giving employees **work discretion** thereby encouraging creativity and introduction of new ideas, **time availability** , that gives employees time and space to experiment with new ideas and finally **work boundaries** that allows for flow of information with the external environment and within departments all in support of entrepreneurial activities.

I am conducting a quantitative study with 300 managers (at all levels) *to* establish whether management support, reward and reinforcement and work discretion encourages innovation, which is an antecedent of Corporate Entrepreneurship. The survey can be completed by the CEOs, Heads of Department, their direct reports who manages staff and junior managers. The report will be made available to organisations who might want to use the results to implement any of the identified strategies at no cost to them.

Your participation

I am asking you to complete a questionnaire that has 40 questions and it will take you 10-20 minutes to complete.

Please understand that **your participation is voluntary** and you are not being forced to take part in this study.

Confidentiality
Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly, including my academic supervisor/s. (All of these people are required to keep your identity confidential.)

All study records will be destroyed after the completion and marking of my thesis. I will refer to you by a code number or pseudonym (another name) in the thesis and any further publication.

Risks/discomforts
At the present time, I do not see any risks in your participation. The risks associated with participation in this study are no greater than those encountered in daily life.

Benefits
There are no immediate benefits to you from participating in this study. However, this study will be extremely helpful to us in understanding the level of innovation in your organisation.

If you would like to receive feedback on the study, I can send you the results of the study when it is completed sometime after June 2016.

Who to contact if you have been harmed or have any concerns
This research has been approved by the Wits Business School. If you have any complaints about ethical aspects of the research or feel that you have been harmed in any way by participating in this study, please contact the Research Office Manager at the Wits Business School, Mmabatho Leeuw. Mmabatho.leeuw@wits.ac.za

If you have concerns or questions about the research you may call my academic research supervisor Dr Robert Venter on +2711 7173629.

CONSENT

I hereby agree to participate in research on Corporate Entrepreneurship in Sate Owned Entities. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop participating at any point should I not want to continue and that this decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not

necessarily to benefit me personally in the immediate or short term.

I understand that my participation will remain confidential.

……..
Signature of participant **Date**:……..

APPENDIX B: INSTRUMENT

How to complete the questionnaire

Some questions seek responses by requesting that you mark a box to indicate a “yes or no” response. Other questions seek for your opinion or request that you mark a box indicating the answer which best reflects your view. You are asked to mark a cross (X) in the box marked from strongly agree to strongly disagree which best reflects your response to the question. For instance, if the question is:

Question	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
Experience is important to foster corporate entrepreneurship.					

Would you please place a cross in box “strongly agree” if it does have impact on your organisation at all. You would cross box “strongly disagree” if it does not have significant impact upon your organisation. The boxes between strongly agree to strongly disagree gives you an opportunity to make your response at an intermediate level.

Please return the questionnaire after a month from the day you received it

Demographics section

1. Name of your organisation _____

2. Gender

Male	**Female**

3. Race

African	**White**	**Indian**	**Coloured**

4. How long have you been in your current organisation?

0-3	4-6	7-9	10 or more

5. How would you best describe your function in your organisation

Operations	Administration	Strategy	Other, Specify

6. What your highest qualification obtained

School leaving certificate (Grade 12)	
National higher certificate	
National Diploma	
Undergraduate Degree	

Honours Degree	
Masters Degree	
PhD	

7. Occupation level? Please tick relevant block

Executive Management	
Senior Management	
Middle Management	
Junior Management	

Questions	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
Section 1: Management support for Corporate Entrepreneurship					
8. My organization is quick to use improved methods					
9. My organization is quick to use improved methods that are developed by workers					
10. In my organization, developing one's own ideas is encouraged for the improvement of the corporation					
11. Upper management is aware and very receptive to my ideas and suggestions					
12. Many of the Top Managers are known for their experience with innovative processes.					
13. Those employees who come up with innovative ideas on their own often receive management encouragement for their activities					
14. People are often encouraged to take calculated risks with ideas around here					
15. The term “risk taker” is considered a positive attribute for people in my work area					

16. The 'doers on projects" are allowed to make decisions without going through elaborate justification and approvals procedures					
Section 2 : Reward/ Reinforcement					
17. My manager helps me get my work done by removing obstacles and roadblocks					
18. My manager would tell his/her boss if my work was outstanding					
19. My current job provides a lot of challenges					
20. A promotion usually follows from the development of new and innovative ideas					
21. Individual risk takers are often recognized for their willingness to champion new projects, whether eventually successful or not					
22. Individuals with successful innovative projects receive additional rewards and compensation beyond the standard reward system for their ideas and efforts					
23. My knowledge and skills can enable me to be more proactive in new project developments					
Section 3: Work Discretion					

24. I feel that I am my own boss and do not have to double check all of my decisions with someone else					
25. The organization provides the freedom to use my own judgement					
26. My work load allows me time to work on other innovative projects					
27. I have the freedom to decide what I do on my job					
28. This organization provides the chance to do something that makes use of my abilities					
29. I have much autonomy on my job and am left on my own to do my own					
30. I seldom have to follow the same work methods or steps for doing my major tasks from day to day					
31. Mistakes are not followed by harsh criticisms and punishments					
32. Red tape and slow approval cycles are problems in this company					
33. Managers in this company strongly believe in delegating decision making responsibility					
Section 4 : Innovation					

34. Our organisation applies IT to improve employee effectiveness					
35. Our organisation regularly researches and develops new products and services					
36. Our organisation has implement new technology to improve processes					
37. Our organisation has an incentive scheme that encourages innovation					
38. Our managers encourage employees to develop new competencies					
39. Our Managers creates an environment that encourages innovation					

40. In the box below , please indicate (X) the number of new ideas you have implemented in the past 12 months that has changed the way things were done in your area of responsibility. This could be a system, process and or product change.

None	Up to 2	Up to 4	Up to 6	Up to 8	Up to 10	10 +

APPENDIX C: CONSISTENCY MATRIX

Research question *Assessing the impact of human capital on corporate entrepreneurship in state owned entities in South Africa and Zimbabwe*.					
Aims of Research	Literature Review	Hypothesis or Propositions or Research questions	Source of data	Type of data	Analysis
Assess the impact of Management support on innovation in State Owned enterprises	-Hambrick & Mason (1984) The organization as a reflection of its top managers Kuratko *et al* (1990) Morris & Kuratko (2002) Corporate entrepreneurship: Entrepreneurial development within organizations Mapetere *et al* (2012) Strategic role of leadership in strategy	• There is a positive relationship between managerial support and entrepreneurial action. *Does Management support encourage innovation in organisations?* *Does the ability to drive change in SOEs differ amongst different level of management?*	- Survey Questionnaire (CEAI instrument) -Tool measures perception - Randomly administered to both managerial , professional and technical staff Total of 200 questionnaires returned. ***Independent Variable questions** : 9-16* ***Dependant Variable questions:** 34-40*	Quantitative 36 Likert – style questions • Nominal for gender and classification • Ordinal for scales	Multiple regression Ordinary Least Squares (OLS) -Covariance because there is more than 1 independent variable - Confirmatory Factor analysis SPSS software was used Cronbach's alpha score test used to determine reliability of the measure. **Validity assessment of CEAI**: Hornsby, Kuratko, Holt,

	implementation in Zimbabwe State owned enterprises				and Wales (2013): When considering the factors of the CEAI, management support was the most strongly correlated at r = .45 (p < .01). EO was less strongly correlated with the other CEAI factors but these relationships were positive and significant. These included work discretion (r = .17, p < .01), rewards /reinforcement (r = .15, p < .01)
Assess the influence of Reward and Reinforcement on innovation in SOEs	Hornsby *et al* (1993 & (2002) An interactive model of corporate entrepreneurship process Jennings and	• There is a significant relationship between reward and reinforcement with staff's motivation to be	Survey Questionnaire (CEAI instrument) -Tool measures perception - Randomly administered to both managerial , professional and technical staff	Quantitative 36 Likert – style questions • Nominal for gender and classificatio	Multiple regression Ordinary Least Squares (OLS) -Covariance because there is more than 1 independent variable - Confirmatory Factor

	Lumpkin (1989) Functionally modelling corporate entrepreneurship	innovative/involved in process innovation. *Does reward / reinforcement play a positive role in motivating staff to be innovative?* *Does the number of innovative ideas implemented increase as a result of perceived rewards at different levels of management?*	Total of 200 questionnaires returned. ***Independent Variable questions** : 17-23* ***Dependant Variable questions:** 34-40*	n • Ordinal for scales	analysis SPSS software was used Cronbach's alpha score test used to determine reliability of the measure. **Validity assessment of CEAI**: Hornsby, Kuratko, Shepherd, and Bott (2009): Management support, rewards/reinforcement, and autonomy/discretion were Significantly correlated with number of ideas implemented.
Assess the extent to which work discretion encourages organisational	Morris & Kuratko (2002) Kuratko, Hornsby & Covin, (2014) Diagnosing the	• There is a significant relationship between work discretion and	Survey Questionnaire (CEAI instrument) -Tool measures perception - Randomly administered to both managerial ,	Quantitative 36 Likert – style questions • Nominal for	Multiple regression Ordinary Least Squares (OLS) -Covariance because there is more than 1

innovation in SOEs.	firm internal environment for corporate entrepreneurship	innovation amongst different levels of managers *Does the number of innovative ideas implemented increase with perceived work discretion amongst managers as different levels?* *Are staff most likely to be more innovative in an environment where they are given more work discretion in SOEs?*	professional and technical staff Total of 200 questionnaires returned. ***Independent Variable questions** : 24-33* ***Dependant Variable questions:**34-40*	gender and classification • Ordinal for scales	independent variable - Confirmatory Factor analysis SPSS software was used Cronbach's alpha score test used to determine reliability of the measure. **Validity assessment of CEAI** Goodale, Kuratko, Hornsby, and Covin (2011): R-squared of .10 between CEAI factors and innovation performance. 3. van Wyk and Adonisi (2012): Extrinsic job satisfaction correlated positively with the corporate Entrepreneurship sub-scales of work discretion and rewards.

APPENDIX D: PROJECT PLAN

	Project Plan																															
No	**ACTIVITY**	**MONTH**	**DATES**																													
		Sep-15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Preparation																															
1	Get permission from SOEs to run survey																															
2	Identify Respondents & contact details																															
3	Set up the electronic instrument																															
4	Meet with Research Supervisor to discuss implementation plan																															

5	Email the survey to respondents																															
6	Appoint a research assistant																															
7	Receive surveys (on going)																															
8	Capture feedback (on going)																															
	Follow up	**Oct-15**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**
9	Meet with Research Supervisor to discuss progress																															
10	Receiving of completed surveys																															
11	Capturing of surveys																															
12	Appoint a statician																															
13	Follow up on outstanding respondents																															

	Statistics	**Nov-15**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	
14	Cleaning of data																																
15	Running of statistical models																																
16	Interpretation the statistical results																																
17	Meeting with Supervisor to discuss progress																																
	Report Writing	**Dec-15**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**
18	Analyse results																																
19	Write Preliminary report																																
20	Appoint an Editor																																
	Editing of Report	**Jan-16**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	
21	Meet with Supervisor to discuss Report																																
22	Review of 2nd draft by supervisor																																

	Finalisation of Report	**Feb-16**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**		
23	Updating changes on 2nd draft																															
24	Meeting with Supervisor to discuss final report																															
25	Updating of minor changes																															
26	Editing of document																															
	Preparations for submission	**March - 16**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**
27	Review of editing																															
28	Submission of final paper to supervisor & review																															
29	Printing & binding																															
30	Submission to Faculty																															