

**INFLUENCE OF MACRO ENVIRONMENT AND TOP
MANAGEMENT DEMOGRAPHICS ON THE RELATIONSHIP
BETWEEN ENTERPRISE RISK MANAGEMENT AND
PERFORMANCE OF KENYAN STATE OWNED CORPORATIONS**

EMMA ANN OTIENO

**A THESIS REPORT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF
DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION,
SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI**

AUGUST 2020

DECLARATION

DECLARATION BY THE CANDIDATE

This thesis is my original work and has not been presented for the award of a degree in any other university. Materials referred to have been duly acknowledged.

Signature .....
EMMA ANN OTIENO
D80/93891/2014


Date 9/09/2020

SUPERVISORS' APPROVAL

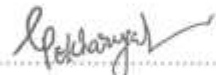
The thesis has been submitted for examination with our approval as the University of Nairobi, supervisors.

Signature .....
PROF. MARTIN OGUTU
Department of Business Administration
School of Business
University of Nairobi

Date 9/9/2020

Signature .....
PROF. BITANGE NDEMO
Department of Business Administration
School of Business
University of Nairobi

Date 9/9/2020

Signature .....
PROF. GANESH P. POKHARIYAL
Department of Applied and Industrial Mathematics
School of Mathematics
University of Nairobi

Date 10/9/2020

COPYRIGHT ©

All rights reserved. No part of this document may be replicated either in part or whole without prior written permission from the researcher or the University of Nairobi except in the case where excerpts are extracted from the document and duly cited. This thesis is copyrighted and therefore duplicating any part of this document for any other use, other than personal, is infringement of the copyright laws. Further correspondence should be addressed to Emma Ann Otieno.

P.O Box 14448-00800

Nairobi.

Telephone + 254 722 602145

E-mail: emmaswwt@gmail.com

ACKNOWLEDGEMENT

My utmost gratitude to God the almighty for his amazing grace that has seen me through this journey. This far I have come thanks to the unwavering support, dedication and encouragement from several concern people surrounding me, who either prayed for my

success, gave me guidance or assisted me in one way or the other to successfully accomplish this phase of my learning life.

My heartfelt gratitude goes to my supervisors; Professor Martin Ogutu, Professor Bitange Ndemo and Professor Ganesh Pokhariyal for their invaluable guidance and support they offered me throughout this research process. Your patience, stewardships, constructive critique and strict adherence to the highest standards of excellence kept me on my toes and indeed challenged me to excel. I am equally grateful to Dr. Joseph Owino, Dr. Duncan Elly and all the other staff of the school of business for their invaluable support and the selfless facilitation they extended to me during the period of my study. I appreciate the School of Business Doctoral Studies Committee for providing the much needed guidance and input when I had the opportunity to share my thoughts regarding this study, not forgetting my special study group PhD class colleagues especially Patricia Mwangi, Peter Gaitho, Ben Mkalama and Alice Gichana with whom we have closely walked with, through the various stages of this challenging but most rewarding journey.

My finalization of this study would never have been realized without the critical phase of data collection and analysis. I would therefore extend my earnest appreciation to all the respondents in Kenyan state corporations, who despite their busy schedule were kind enough to spare some time to complete the questionnaires.

To my employer and colleagues at Communications Authority of Kenya (CA), I am truly grateful. Starting with the Director General, Mr. Francis Wangusi, who constantly encouraged me and allowed me time out of the very busy office schedule, to attend to matters relating to my PhD studies. Secondly, special thanks to my the staff at the Director General's office who always offered to assist me and cover most of my duties

while I took time off to attend to my school work and finally, to the management of the Authority for having in place a supportive policy that allows staff to pursue higher education. It is my belief that my thesis will assist CA to better implement Enterprise Risk Management and further improve the Authority's performance.

My sincere gratitude goes to my loving family, starting from my dad Albert, mum Mary, all my sisters and my brothers who have been my strongest supporters more-so when it comes to attaining the highest level of education. To my immediate family, my life partner and our adorable children Shallom, Shekhainah and Shaddai. You gave me an easy time and understood whenever mum had to be away to attend to my schoolwork or just needed some space at home to attend to my studies. Thank you for the pressure you asserted with the constant question of, '*mum when shall you graduate with the PhD*', this question kept me focused and indeed I have delivered on this promise. To my extended family, who were always there for me and kept wishing me well through this entire process, I appreciate you. Indeed, many people have contributed to this success, some named here-in and other unnamed, but to you all, I truly appreciate and wish you all God's blessings.

"There is no such thing as a self-made man. We are made up of thousands of others."
George Matthew Adams (1878-1962)

DEDICATION

To my wonderful children Shallom, Shekhainah and Shaddai, if only to inspire you to go for the best you ever can. May the sky be your footstool

&

To my dad Albert who saw me attaining this degree way before I started my schooling and mum who made it her duty to ensure that I kept to the path! Dad and mum I have done it the best way I have known how and promise to keep moving.

TABLE OF CONTENTS

DECLARATION.....	i
ACKNOWLEDGEMENT.....	ii
DEDICATION.....	iv
TABLE OF CONTENTS	v
LIST OF TABLES	x
LIST OF FIGURES	xiv
ABBREVIATIONS AND ACRONYMS.....	xv

ABSTRACT	xvi
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study	1
1.1.1 Enterprise Risk Management.....	4
1.1.2 Macro Environment	5
1.1.3 Top Management Demographics	6
1.1.4 Organizational Performance	8
1.1.5 Kenyan State Corporations	9
1.2 Research Problem	10
1.3 Research Objectives.....	15
1.4 Value of the Study	16
1.5 Chapter Summary	17
CHAPTER TWO	18
LITERATURE REVIEW	18
2.1 Introduction.....	18
2.2 Theoretical foundation.....	19
2.2.1 Contingency Theory of Enterprise Risk Management.....	19
2.2.2 Open Systems Theory	21
2.2.3 Upper Echelons’ Theory	22
2.2.4 Stakeholder Theory.....	23
2.3 Enterprise Risk Management and Performance.....	24
2.4 Enterprise Risk Management, Macro-Environment and Performance	26
2.5 Enterprise Risk Management, Top Management Demographics and Performance.....	28
2.6 Enterprise Risk Management, Top Management Demographics, Macro- Environment and Performance	31
2.7 Summary of Knowledge Gaps	33
2.8 Conceptual Framework.....	37
2.9 Conceptual Hypotheses.....	38
2.10 Chapter Summary	38
CHAPTER THREE	40
RESEARCH METHODOLOGY	40
3.1 Introduction.....	40

3.2 Research Philosophy	40
3.3 Research Design.....	41
3.4 Population of the Study.....	42
3.4.1 Sampling Technique	42
3.5 Data Collection	44
3.6 Reliability Test.....	45
3.7 Validity Test.....	45
3.8 Operationalization of Study Variables.....	46
3.9 Diagnostic Tests.....	48
3.10 Data Analysis	49
3.11 Chapter Summary	52
CHAPTER FOUR.....	53
DATA ANALYSIS AND FINDINGS.....	53
4.1 Introduction.....	53
4.2 Response Rate	54
4.3 Test of Reliability	54
4.4 Test of Validity	55
4.5 Factor Analysis	56
4.5.1 Enterprise Risk Management.....	56
4.5.2 Macro-Environment.....	62
4.5.3 Top Management Demographics.....	66
4.5.5 Organizational Performance	70
4.6 Diagnostic Tests	74
4.6.1 Linearity.....	75
4.6.2 Normality	76
4.6.3 Multicollinearity	79
4.6.4 Homoscedasticity.....	81
4.7 Demographic Characteristics of the Respondents	84
4.7.1 Parent Ministry.....	84
4.7.2 Number of Employees	85
4.7.3 Years of Operation.....	86
4.7.4 Scope of Operation	86
4.7.5 Ownership Structure	87
4.7.6 Organization Interest Category	87

4.8 Descriptive Statistics.....	88
4.8.1 Enterprise Risk Management.....	88
4.8.2 Macro Environment.....	94
4.8.3 Top Management Demographics.....	99
4.8.4 Organizational Performance.....	101
4.9 Hypothesis Testing.....	104
4.9.1 Enterprise Risk Management and Performance of Kenyan State Owned Corporations.....	105
4.9.2 Influence of Macro Environment on the Relationship between Enterprise Risk Management and Performance of Kenyan State Owned Corporations.....	109
4.9.3 The Effect of Top Management Demographics on the Relationship between Enterprise Risk Management and Performance of Kenyan SOEs.....	122
4.9.4 The Joint Effect of Enterprise Risk Management, Top Management Demographics and Macro Environment on Performance of Kenyan SOEs.....	154
4.10 Summary of Hypotheses Testing.....	158
4.11 Chapter Summary.....	159
CHAPTER FIVE.....	160
DISCUSSION OF FINDINGS.....	160
5.1 Introduction.....	160
5.2 Enterprise Risk Management and Organizational Performance.....	161
5.3 Enterprise risk management, Macro environment and Organizational performance.....	166
5.4 Enterprise Risk Management, Top Management Demographics and Organizational Performance.....	171
5.5 Enterprise Risk Management, Macro Environment, Top Management Demographics, and Organizational Performance.....	177
5.6 Chapter Summary.....	179
CHAPTER SIX.....	181
SUMMARY, CONCLUSION AND RECOMMENDATIONS.....	181
6.1 Introduction.....	181
6.2 Summary of Findings.....	181

6.3 Conclusion	184
6.4 Implications of the Study	186
6.4.1 Theoretical Implications	187
6.4.2 Implications for Policy.....	190
6.4.3 Implications on Practice.....	192
6.5.1 Limitations of the Study.....	194
6.6 Suggestion for Further Research.....	197
6.7 Chapter Summary	199
REFERENCES.....	200
APPENDICES	212
Appendix I: Research Questionnaire	212
Appendix II: List of Kenyan State Owned Corporations.....	221
Appendix III: Introductory Letter	229
Appendix IV: NACOSTI Research Permit.....	230

LIST OF TABLES

Table 2.1: Summary of Knowledge Gaps	34
Table 3.1: Sample Size Determination.....	44
Table 3.2: Operationalization of Study Variables	47
Table 3.3: Summary of Objectives, Hypotheses and Analytical Model.....	49
Table 4.1: Response Rate	54
Table 4.2: Test of Reliability.....	55
Table 4.3: KMO and Bartlett's Test	57
Table 4.4: Total Variance Explained.....	57
Table 4.5: Rotated Component Matrix.....	59
Table 4.5: Rotated Component Matrix (Cont'd).....	60
Table 4.6: KMO and Bartlett's Test	62
Table 4.7: Total Variance Explained.....	63
Table 4.8: Rotated Component Matrix.....	65
Table 4.9: KMO and Bartlett's Test	67
Table 4.10: Total Variance Explained.....	67
Table 4.11: Rotated Component Matrix.....	69
Table 4.12: KMO and Bartlett's Test	70
Table 4.13: Total Variance Explained.....	71
Table 4.14: Rotated Component Matrix.....	73
Table 4.15: Linearity (ANOVA).....	75
Table 4.16: Table results for Shapiro-Wilk Tests of Normality	76
Table 4.17: Correlation Matrix.....	80
Table 4.18: Variance Inflation Factor	80
Table 4.19: Distribution of Selected SOEs by Parent Ministry	84

Table 4.20: Distribution by Number of Employees	85
Table 4.21: Distribution by Years of Operation.....	86
Table 4.22: Distribution by Scope of Operation	86
Table 4.23: Distribution by Ownership Structure	87
Table 4.24: Distribution by Interest Category.....	88
Table 4.25: Descriptive Statistics for ERM-Context Setting	89
Table 4.26: Descriptive Statistics for Risk Assessment.....	90
Table 4.27: Descriptive Statistics for Risk evaluation	91
Table 4.28: Descriptive Statistics for ERM Communication	93
Table 4.29: Descriptive Statistics for Political Environment.....	95
Table 4.30: Descriptive Statistics for Economic Environment.....	96
Table 4.31: Descriptive Statistics for Social Environment	97
Table 4.32: Descriptive Statistics for Technological and Legal Environment	98
Table 4.33: Top management demographics	99
Table 4.34: Organizational Financial Performance.....	101
Table 4.35: Organizational Non-Financial Performance	102
Table 4.36: Influence of ERM on Financial Performance	106
Table 4.37: Influence of ERM on Non-Financial Performance	107
Table 4.38: Influence of ERM on Organizational Performance	107
Table 4.39: Moderating Influence of Macro-environment on the Relationship between ERM and Organizational Performance	110
Table 4.40: H _{2a} -Moderating Influence of Political Environment on the Relationship between ERM and Organizational Performance	

Table 4.41: H _{2b} -Moderating Influence of Economic Environment on the Relationship between ERM and Organizational Performance.....	114
Table 4.42: H _{2c} -Moderating Influence of Social Environment on the Relationship between ERM and Organizational Performance	116
Table 4.43: H _{2d} -Moderating Influence of Technological Environment on the Relationship between ERM and Organizational Performance.....	118
Table 4.44: H _{2e} -Moderating Influence of Legal Environment on the Relationship between ERM and Organizational Performance	120
Table 4.45: Moderating Influence of Top Management Demographics on the Relationship between ERM and Organizational Performance.....	122
Table 4.46: Moderating Influence of age on the Relationship between ERM and non-financial Performance.....	125
Table 4.47: Moderating Influence of age on the Relationship between ERM and financial Performance.....	127
Table 4.48: Moderating Influence of age on the Relationship between ERM and overall Performance	129
Table 4.49: Moderating Influence of education on the Relationship between ERM and non-financial Performance	131
Table 4.50: Moderating Influence of education on the Relationship between ERM and financial Performance.....	133
Table 4.51: Moderating Influence of education on the Relationship between ERM and overall Performance.....	135
Table 4.52: Moderating Influence of functional background on the Relationship between ERM and non-financial Performance	137

Table 4.53: Moderating Influence of functional background on the Relationship between ERM and financial Performance	139
Table 4.54: Moderating Influence of functional background on the Relationship between ERM and overall Performance	141
Table 4.55: Moderating Influence of tenure on the Relationship between ERM and non-financial Performance	143
Table 4.56: Moderating Influence of tenure on the Relationship between ERM and financial Performance.....	145
Table 4.57: Moderating Influence of tenure on the Relationship between ERM and overall Performance	146
Table 4.58: Moderating Influence of gender on the Relationship between ERM and non-financial Performance	148
Table 4.59: Moderating Influence of gender on the Relationship between ERM and financial Performance.....	151
Table 4.60: Moderating Influence of gender on the Relationship between ERM and overall Performance	152
Table 4.61: Regression Results for the Individual Effect of ERM and joint effect of ERM, TMD and ME on Organizational Performance	156
Table 4.62: Summary of Hypotheses Conclusions	158

LIST OF FIGURES

Figure 2.1: Conceptual Framework	37
Figure 4.1: Scree Plot.....	58
Figure 4.2: Scree plot.....	64
Figure 4.3: Scree Plot.....	68
Figure 4.4 Scree Plot.....	72
Figure 4.5(a): P-P Plot for ERM.....	77
Figure 4.5(b): P-P Plot for Top Management Demographics.....	78
Figure 4.6: Residual Scatter Plot for ERM and Organizational Performance	82
Figure 4.7: Residual Scatter Plot for TMD and Organizational Performance	82
Figure 4.8: Residual Scatter Plot for macro environment and Organizational Performance.....	83
Figure 6.1: Empirical Conceptual Model.....	188

ABBREVIATIONS AND ACRONYMS

COSO	Committee of Sponsoring Organizations of the Treadway Commission
ERM	Enterprise Risk Management
GoK	Government of Kenya
KIPPRA	Kenya Institute of Public Research
NSE	Nairobi Securities Exchange
PWC	PricewaterhouseCoopers
SC	State Corporations
SOEs	State Owned Enterprises
SMEs	Small and Medium-Sized Enterprises
TMD	Top Management Demographics
TMT	Top Management Team
VIF	Variance Inflation Factor

ABSTRACT

This study was a conceptualization of the relationship between Enterprise risk management (ERM), macro environment, Top management demographics (TMD) and organizational performance. Some researchers have argued that Enterprise risk management has a positive influence on performance while others have advanced that the influence is negative, whereas others have contended that this strategic management practice is fairly recent and its effect is yet to be fully realized. There is also no agreement on the moderating influence of both macro environment and Top management demographics on the relationship between Enterprise risk management and performance. Additionally, the moderating influence of macro environment on the relationship between Enterprise risk management and organizational performance has been inconclusive. It was for this reason, that there was need to explore the existence of such relationships. The study context was Kenya state-owned corporations. The general objective of the study was to establish the relationship between Enterprise risk management, Top management demographics, macro environment and the performance of Kenya state-owned corporations. Arising from this broad objective, the specific objectives were to: 1) Investigate the influence of Enterprise risk management on the performance of state corporations; 2) determined the moderating influence of macro environment on the relationship between Enterprise risk management and performance of the state corporations; 3) examine the moderating influence of Top management demographics on the relationship; 4) determine the joint influence of Enterprise risk management, Top management demographics and macro environment on the performance of the state corporations. The study applied a cross sectional survey design and use of structured questionnaire and collected data from 92 state corporations. Descriptive and inferential statistics were used to analyze the data. Hypotheses were tested using both simple and multiple regression analysis. Baron and Kenny model was used in testing the moderating effects. The study findings indicated that: 1) Enterprise risk management had a statistically significant influence on performance of Kenya owned state corporations; 2) Top management demographics significantly moderated the relationship between Enterprise risk management and performance; 3) Macro environment had no significant moderating influence on the relationship; 4). Enterprise risk management, Top management demographics and macro environment jointly significantly influenced performance of the state corporations. The results supported upper echelons theory, contingency theory of enterprise risk management and stakeholder's theory. However, the results failed to support the proposition of open systems theory. The study makes significant contribution to knowledge by: 1) Validating the propositions of the Contingency theory of Enterprise risk management and establishing the significant positive influence of Enterprise risk management on organizational performance in the public sector context 2) Advancing the significant moderating influence of Top management demographics on the relationship between Enterprise risk management and performance and 3) establishing the significant joint effect of Enterprise risk management, Top management demographics and macro environment on performance. The study results will be valuable to policy makers in re-enforcing and adoption of Enterprise risk management in State-owned agencies, organizational leadership in integrating Enterprise risk management with organization-wide strategic management activities. The study suggests that future studies could adopt different research designs and investigate different contexts.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Risk management issues have grown in importance within the context of both non-financial and financial organizations undoubtedly with the reason that the business environment is rapidly changing and constantly hardening (Kosmala, 2014 and Verlag, 2014). According to Culp (2002), the discussion of risk management is still considered odd by several organizations especially in the non-financial sector. Despite this view, Enterprise risk management (ERM) is increasingly being recognized as a strategic management practice that enhances organizations' effectiveness in assessing and management of risks, in a timely and efficient manner (Radner & Shepp, 1996), which in turn enables top management to re-evaluate and improve overall performance of the organization in the dynamic operating environment (Lundqvist, 2014). Risk management practices to be adopted by an organization are majorly determined by the firm's operating macro environment (Dickinson, 2001).

There is an increasing prominence in literature tending to link performance and Enterprise risk management in organizations globally (Rizzi & Schoening, 2011). However, in as much as organizations acknowledge the importance of Enterprise risk management on performance, it is similarly important to understand how other variables such as Macro environment and top management demographics (TMD) may influence this relationship (Brustbauer, 2014). Contingency theory, Open systems theory, the upper echelons theory, and stakeholder theory suggests a framework that anchors the relationship between Enterprise risk management, Top management demographics, macro-environment and organizational performance.

The Contingency theory of Enterprise risk management postulates that management of risks is most effective when a 'fit' is established between the contingent factors of the firm's Enterprise risk management practices, establishing propositions that will result in desired organizational outcomes (Kaplan & Mike, 2014). The Upper Echelons theory associates how executives' demographic characteristics relate to a variety of organizational processes, choice of strategy and influence performance (Hambrick & Mason, 1984). The open systems theory advances that an organization is a system that keeps interacting with its external environment and responding of the environmental forces depending on the nature of the organization and the prevailing external environment factors (Bertalanffy, 1968). Whereas, the Stakeholders theory views the performance of the organization as a function of how effectively the organization creates value for its different stakeholders (Freeman, 1984).

Organizational outcomes, response style to external environmental forces and propensity to adopt strategies such as Enterprise risk management are to some extent predicated within some top management characteristics such as age, tenure, education and background (Culp, 2002). Hambrick and Mason (1984) ignited the debate in strategic management literature on the central part that top management teams (TMTs) play in formulating strategies that align organization's strategies to effectively respond to the environment and consequently influence performance. Nielsen and Nielsen (2013) advanced this argument by stating that top management demographics including age, tenure in the organization, functional background, gender and education did predict the capability to adopt risk management and influence performance. Top management teams are critical in understanding external contexts and creating the fit between the organization and environment (Pearce & Robinson, 2003). Top management's essential role in this context is to intervene on patterns of commitments in place and re-direct the

character of organizational-environment relationship to mitigate of risks being span from the environment (Dabari & Saidin, 2014). Top Management must therefore, keep re-examining the macro environment and adopt strategic practices such as Enterprise risk management to support corporate strategy implementation and enhance the organization's performance (McShane & Rustambekov, 2011).

Kenyan state-owned corporations (SCs) are created to facilitate government in fulfilling its core responsibility of achieving sustained socio-economic development (Kobia & Mohamed, 2006). These state agencies are therefore expected to participate in policy implementation and revamping service delivery across the public sectors including; energy, transport, infrastructure, health, communications, tourism, agriculture and education to ultimately attain the aspirations of the country's Vision 2030 (Kenya Institute of Public Policy Research Analysis (KIPPRA), 2009). Despite the vital role of the state agencies in delivering government's core objectives, state corporations are increasingly experiencing unprecedented risks emanating from the macro environment and impacting on their performance (PricewaterhouseCoopers (PWC), 2012). This has brought to question the performance of state corporations, when compared to their heavy running budgets that burdens the citizens (Kobia & Mohamed, 2006). Accordingly, the government of Kenya under its public sector reforms programme, institutionalized Enterprise risk management under the aegis of government performance reforms (PWC, 2015). However, the limited empirical research available relating to Enterprise risk management and organizational performance within the public sector has produced mixed results (McShane & Rustambekov, 2011). Additionally, the adoption of this emerging practice is seemingly slow (Rao, 2007). It is for this reason that an investigation of the association between Enterprise risk management, macro environment, top management demographics and

their influence on organization performance in Kenyan owned State Corporations was found to be pertinent, thus the impetus for this study.

1.1.1 Enterprise Risk Management

Enterprise risk management is a strategic management practice, adopted by organizations at different levels of the enterprise strategic setting to identify any eventualities that can affect its operations. The purpose of Enterprise risk management is to manage risks within the adopted risk tolerance and offer realistic guarantee in achieving an entity's goals and objectives (Committee of Sponsoring Organizations of the Treadway Commission (COSO), 2004). Effective Enterprise risk management promotes risk-management that enables the organization to be in a better position to effectively implement its strategic decisions (Nocco & Stulz, 2006).

The concept of Enterprise risk management is synonymous with integrated risk management, strategic risk management and enterprise-wide risk management (Walker et al., 2003). Enterprise risk management is still considered as an evolving practice (Kaplan & Mike, 2014), whose implementation anchored on a number of varying frameworks including the Committee of Sponsoring Organizations of the Treadway Commission (COSO); integrated framework of ISO 31000-2009, and other sector specific frameworks created by the established sector regulating agencies or organizations themselves (Lundqvist, 2014). Despite the variation in the adoption and application of Enterprise risk management by organizations, there are three broad components that entail any form of enterprise risk management approach, a governance activity, a linkage to strategic activities, a monitoring activity addressing any potential eventualities threatening achievement of strategic goals and oversight at multiple levels (McShane & Rustambekov, 2011). However, each organization has its own way of the

level of formality, adoption, maturity and engagement of Enterprise risk management activities (Farah & Muneera, 2017). Enterprise risk management as perceived by the Standard and Poor's enterprise risk management framework include, organizations' risk culture review, risk management roles, communications, risk policies and procedures, and risk management on strategic management decisions (Beasley & Hermanson, 2005). ISO (2009) focuses on managing the organization with regard to risks but not managing risks.

Organizations may manage the risks with the expectations to support the value creation process (Kosmala, 2014). However, two distinctive approaches to risk management should be taken into consideration, strategic and traditional. A strategic approach towards risk management is critical in the integration of risk management concepts and activities to organization wide strategic activities (Brustbauer, 2014). The risk management is designed to facilitate growth of organizations, if well integrated with other top management decisions (Nocco & Stulz, 2006). However, traditional approach majorly focuses on negative impact of risk, thereby basing its assessment and measurement on the probability of the loss incurred or its severity (Lundqvist, 2014).

1.1.2 Macro Environment

Thompson (1967) defines a firm's environment as the aggregate of external factors that have impacts or potential to have impacts on the functioning of an organization. It is the source of constraints, contingencies, problems and opportunities that affect the terms on which organizations transacts business. Macro-environment comprises of factors spanning beyond the firm's operating sphere (Hitt, Ireland & Hoskinson, 2011). These factors include economic, ecological, legal, social, technological and political

factors (Pearce & Robins, 2003). Organization theorists have emphasized the importance of an organization in adapting to the environment in order to remain viable (Ansoff & McDonnell, 1990).

Organizational performance relates to the changes and the dynamism of the relationship that exist between the organization and the operating environment (Machuki & Aosa, 2011). As the environment changes therefore, organization's survival entirely depends on devising appropriate responses to unforeseen discontinuities. There has been a debate as to whether top management can strongly influence this fit through enterprise risk management mechanisms (Child, 1972). Indeed, it has been argued in research that the environmental perceptions can influence highly the organizational existing risk management coping mechanisms. The environment can either be perceived to pose a threat or offer opportunities necessary to steer the performance (Hubbard, 2009). However, with adopting flexibility in risk management coping strategies, coupled with positive attitudes towards uncertainty, an organization may find even the most perceived environmental turbulence to be the source of opportunities as opposed to threats (Beasley et. al., 2006). This would therefore mean that, if organizations may predict accurately and with certainty the extent and direction of changes in the macro environment factor including, economic, ecological, legal, social, technological and political factors, it may effectively gain competitive advantage and eventually improve its overall performance (Herbane, 2010).

1.1.3 Top Management Demographics

Hambrick (2007) defines top management demographics as features attributed to individual managers, learned or innate, cognitive or observable and are pointers of fundamentals that such managers bring to decision-making situations. Different views

have emerged on how top management demographics influences organization performance (Awino, 2013). This is because the role of top management is considered to be the center of information processing of any organization as far as its environment is concerned (Certo, Lester, Dalton & Dalton, 2006). In many organizations that are large and complex in nature, the responsibilities of managers' do constitute the efforts of coalition of individuals that are mandated with the responsibility of managing a company but not based on individual efforts, more so in formulating, executing and implementation of strategies (Hambrick & Mason, 1984). Top management demographics is seen as the main player in operationalizing chosen strategy that does influence the actions taken to actualize the objectives of organizational goals (Wiersema & Bantel, 1992).

According to Hambrick (2007) Top management demographics include; financial positions, education, age and functional background. Nielson and Nielson (2013) included tenure, while Marimuthu and Kolandaisamy (2009) included gender. Regarding the proposition of functional background, Certo et al. (2006) argue that a manager brings to their job the knowledge they have attained in a distinct functional area which influences their capacity to develop strategies for growth. Long tenure top managers seem to lean towards status quo and are usually reluctant to execute risk management strategies (Henderson, Miller & Hambrick, 2006). Top management demographics homogeneity refers to similarities that exhibit in demographics of team members and other important values, cognitive aspects and experiences whereas heterogeneity is the differences in demographics of team members (Michel & Hambrick, 1992). Group heterogeneity has also been associated with creativity and high level of innovation (Wiersema & Bantel 1992). Top management teams with varied tenure benefit from the diverse perspectives and experiences inherent in the

individuals, and this has a positive influence on performance (Nielson & Nielson, 2013).

The benefits that may accrue from diverse top management members team is that they exhibit different views in decision making which are associated with diversity in thinking, novelty and comprehensiveness in the solutions recommended (Mwangi, 2018). Several studies have been carried out on top management heterogeneity. However, the results have provided mixed findings, leaving the question as to whether diversity in top management demographics affects the association between performance and enterprise risk management unanswered and open for discussion (Kleffner et al., 2003).

1.1.4 Organizational Performance

The major consideration and purpose of any serious organization is to try and outperform the competitors in the industry by delivering sustained and superior returns to the owners of the firm and satisfy all the other stakeholders (Child, 1972). According to Machuki and Aosa, (2011), the purposes of organizations evaluating comparative organizational success and failure are conspicuous discourse in the affairs of organizational management. The actual results in comparison with the intended objectives, goals and outputs constitute the actual performance of the organization (Porter, 1980). Conventionally, financial indicators were the sole measures of performance (Wiersema & Bantel, 1992). However due to the inadequacy of this approach in gauging a firm's performance, and growing interest in the environmental and social activities of the firm, dimensions of measuring performance such as balanced score card (Kaplan & Norton, 1996), triple bottom line, and recently the sustainable balance scored are increasingly being adopted (Mahapatro, 2010).

Pfennigstorg (1977) advances that generally, performance in state corporations globally is measured in two broad areas; financial stewardship and non-financial aspects comprising service delivery, quality management, organizational development and compliance with statutory requirements. Organizational performance is the most important construct for organizational survival of an entity and is reflected in its capacity in fulfilling the mission and key objectives through strategy, strong governance, sound management and a persistent dedication to achieve goals and results (Radner & Shepp, 1996). It is for this reasons that the various operationalization of organization performance must constantly be the subject of empirical investigation (Kaplan & Norton, 1996).

1.1.5 Kenyan State Corporations

Kenyan state-owned enterprises also referred to as state corporations (SCs) or parastatals are enterprises formed to meet socio-political-economic goals or correct market failure where such services cannot profitably be provided by private investors (Kobia & Mohammed, 2006 and Government of Kenya (GoK), 2003). State Corporations are established in some instances, to meet regulatory objectives (Obong'o, 2009).

The establishment of State corporations in Kenya is through a statute and an Act of parliament pursuant to various Acts within the state Corporation Act Cap.446. Their mandate is to deal with major functions, which may include products or services designed to enhance citizens' welfare that may be otherwise very unaffordable and unsustainable when left in the hands of the private individuals. They are also required by the government to make a surplus so that they can sustain themselves and meet their intended objectives (Kobia & Mohammed, 2006).

The dismal performance of Kenya owned state corporations, which could partly be attributed to several factors including governance challenges, in adequate strategy implementation and leadership challenges (PWC, 2012). The realization of the inadequacies in the performance of state corporations caused the government of Kenya to introduce reforms to hasten the achievement of a sustained economic growth. Some of the key components of the reforms were mandatory performance contracting and the institutionalization of Enterprise risk management in all state corporations (GoK, 2013). It is worthwhile noting that the reform specific to introduction of Enterprise risk management was informed by the dynamism of the external environment and did also task state corporations' Top leadership with the responsibility of ensuring the adoption of Enterprise risk management (GoK, 2015). However, the association of the aforementioned variables with performance of Kenya owned state corporations remained unclear (PWC, 2015). The republic of Kenya has 187 state corporations existing for various reasons with specific mandates (Directorate of Personnel Management, 2006). These includes, agencies formulated to exploit political and social objectives, correct market failure, provide health and education, maintain equality through redistribution of income and also participate in the development of marginalized areas (GoK, 2012).

1.2 Research Problem

Organizational performance is a major concern to all organizations, whether financial or non-financial in nature (Beasley et. al., 2006). It is for this reason, that scholars in strategic management have interest in establishing the aspects that influence performance and to what extent (Verlag, 2014). Management of risk is a subject that is gradually grown in importance within the context of both non-financial and financial

organizations, undoubtedly, for the reason that the business environment is rapidly changing and constantly hardening (Kosmala, 2014).

Ansoff and McDonnell (1990) advanced the importance and need for organizations' effective response to their external environment through the formulation and adoption of appropriate strategic management practices and establishing a 'fit' between the organization and its environment. This fit includes the adoption of appropriate practices such as Enterprise risk management to aid on the mitigation of uncertainties that span from the macro environment and impact on performance (Nocco & Stulz, 2006). This assertion necessitated an analysis of the influences of macro environment on the relationship between Enterprise risk management and organization performance. Top management teams are seen to control organizational strategy formulation process and key decisions relating to strategy adoption (Ondari, 2015). This situation therefore places the important responsibility for enhancing organization performance as one of the key responsibilities of the top management team, therefore calling for consideration of the teams' diversity as regards their demographics characteristics (Hambrick & Mason, 1984).

Globally, a majority of public sector organizations are increasingly finding that the implementation of Enterprise risk management enhances to a large extent their ability to manage risks and better meet their organizational objectives (PWC, 2012). However, Culp (2002) advanced that the discussion on Enterprise risk management is still being considered odd by several organizations even with the realization that risks emanating

from environmental dynamism are rapidly increasing. This situation has been linked to the limited evidence as regards the association between the adoption of Enterprise risk management to enhanced organizational performance (Beasley & Hermanson, 2005).

The government of Kenya in the year 2009 through circular No.3/2009, introduced Enterprise risk management in its State Corporations, as a mandatory strategic management practice. This performance reform decision was later augmented through Executive Order No.7/2015, which cited the increasing risks span from the macro environment and impacting on the performance of state corporations as the justification for the introduction of Enterprise risk management as a mandatory practice (GoK, 2015). The reform decision also recognized the important role of top leadership in strategy implementation and placed the responsibility of enforcing Enterprise risk management to Top management teams within the respective State Corporations. The overall goal for effecting this reform was to enhance performance noting the strategic importance of Kenya Owned state corporations in driving the achievement of Kenya's socio-economic agenda as envisioned in the country's Vision 2030, aiming to transform Kenya into a middle income industrialized economy, providing a high quality of life to all its citizens by 2030 (GoK, 2013).

Despite the introduction of Enterprise risk management in State Corporations as a strategy to mitigate on risks from the macro environment and the noted accompanying responsibility of top management, the influence of macro environment and top management demographics on the relationship between Enterprise risk management and organization performance within the Kenyan owned State Corporations still remained unclear, thus signifying gaps which necessitated an examination of relationships between these variables within Kenyan owned State Corporations.

According to McShane and Rustambekov (2011), debate on the association between organizational performance and ERM has been inconclusive. Conceptually, studies have hardly explored the association between Enterprise risk management, Top management demographics, Macro Environment and organization performance. A few studies that looked at organizational performance and Enterprise risk management provided inconclusive and mixed results. Studies by (Gilley et al., 2002; Yegon, 2015; Williams, 2005) advanced the existence of a positive relationship between Enterprise risk management and performance, others positing that the influence of Enterprise risk management on organizational performance differs in extent (Aaker & Jacobson, 1987; Belanes & Hachana, 2009). Whereas others concluded that, organizations have only adopted Enterprise risk management as a recent practice and to varying extent and therefore had not fully realized the impact (Rao, 2007; Beasley et al., 2006). Studies by Irungu (2007), Awino (2013) and Ondari (2015) investigated the relationship between Top management demographics and organizational performance. These studies established that different demographic factors had different magnitudes and direction of influence on performance. Separately, Machuki and Aosa (2011), Odundo (2012) and Mkalama (2014) focused on external environment and performance where they posited different results regarding the influence of the environment. Arising from the review of empirical studies and the inconsistently reported findings, it was clear that, conceptually, there was a need to establish the influence of Top management demographics and macro environment on the relationship between Enterprise risk management and performance State agencies, since to the best of the researcher's knowledge, no study had sought to establish this relationship, thereby making this, one of the gaps that the study sought to address.

Limited empirical studies have investigated the association between Enterprise risk management and organizational performance (Yegon, 2015). Contextually, Lundqvist (2014) studied Enterprise risk management implementation and firm performance of publicly listed firms, focusing on Nordic countries where it was established that four underlying pillars of Enterprise risk management enhances firm performance. Rao (2007) measured the importance of Enterprise risk management to firm performance across different sectors in Dubai and established that there was a need for organizations to integrate Enterprise risk management to management processes. Sunjka and Emwanu (2015) analyzed Enterprise risk management practices and performance in manufacturing small and medium-sized enterprises in South Africa and established that higher risks to the firms emanated from the external environment. Dabari and Saidin (2014) examined level of implementation of Enterprise risk management and influence of top management in the banking sector in Nigeria and established a positive relationship. It is worthwhile noting that most studies have tended to focus on the financial sector with a significant number targeting developed jurisdictions (PWC, 2012 and KIPPRA, 2009). Limited studies have explored the proposed study variables and their relationship, with hardly any focusing on the public sector in developing countries. To the best of the researcher's knowledge, no study has investigated the relationship between the proposed variables in the context of Kenyan owned state corporations, making this an additional gap that the study took to address.

The empirical review undertaken revealed that studies undertaken adopted varying research designs and methods to investigate the concepts of the study independently. For instance, Rao (2007) adopted census survey to evaluate the impact of Enterprise risk management in private organizations, Sunjka and Emwanu (2015) adopted the case study approach to explore the relationship between ERM and performance. Irungu

(2007) and Machuki and Aosa (2011) studied top management and external environment as independent variables adopting cross sectional survey design respectively. This study adopted cross sectional survey design and applied regression analysis to investigate moderating effect of top management demographics and macro-environment on the relationship between ERM and performance of Kenyan state corporations. It was further established that the interaction between Enterprise risk management, macro environment and top management demographics and their joint influence on performance of state corporations in Kenya had not been investigated in this manner previously. To address this and the fore mentioned conceptual and contextual gaps, this study sought to answer the question: What is the influence of macro-environment and top management demographics on the relationship between Enterprise risk management and performance of Kenya owned state corporations?

1.3 Research Objectives

The broad objective of the study was to establish the relationship between Enterprise risk management, macro-environment, Top management demographics and the performance of state-owned corporations in Kenya. The study's specific objectives were:

- i. To investigate the influence of enterprise risk management on the performance of Kenyan state-owned corporations.

- ii. To determine the influence of macro environment on the relationship between enterprise risk management and performance in Kenyan state-owned corporations.
- iii. To examine the influence of top management demographics on the relationship between enterprise risk management and performance in Kenyan state-owned corporations
- iv. To determine the joint influence of enterprise risk management, top management demographics and macro environment on the performance in Kenyan state-owned corporations.

1.4 Value of the Study

The study findings integrate the proposition that the adoption of Enterprise risk management as a strategic management practice influences performance in public organizations. This study provides the insight on the joint relationship influence of enterprise risk management, top management demographics and macro environment factors on performance of state corporations in Kenya.

The study made a significant original contribution in the areas of theory, practice and policy development. Regarding the theoretical perspectives, the study re-contextualized and validated the propositions of contingency theory of Enterprise risk management in the context of Kenyan Owned State Corporations, by confirming the existence of a position significant relationship between Enterprise risk management and financial, non-financial and overall performance. The study further validated the advancements of the upper echelons theory by concluding that top management demographics significantly influences, the relationship between Enterprise risk management and performance. More specifically, was the reported significant positive

influence of tenure and negative influence of age on the relationship between Enterprise risk management and financial, non-financial and overall performance.

The study informs policy development on the modalities to enhance on the enforcement of the adoption of Enterprise risk management among the State Corporations, in view of the established significant positive influence. This will hasten the envisaged reforms agenda of attaining sustainability, improved performance and service excellence among the State corporations, towards the realization of the government's Vision 2030. Additionally, regarding management practice, the study findings inform the need for the integration of Enterprise risk management and organizational strategic management activities and a further need to balance the top management teams in view of the findings regarding individual effects of Top management demographics on performance. Finally, the study enriches the limited local academic literature on the subject of Enterprise risk management and organization performance for non-financial organizations and the public sector for that matter.

1.5 Chapter Summary

Chapter one provided the study's introduction and research study background. It outlined the study background where the conceptual discussion was first set out showing the link between Enterprise risk management, top management demographics, macro environment and organizational performance. A theoretical discussion was then presented in relation to the contingency theory of Enterprise risk management, Upper echelons, Open systems and Stakeholders theoretical perspectives that were used to link enterprise risk management, top management demographics, macro environment and organizational performance. The contextual discussion was then advanced.

The research problem was later discussed from which the conceptual, methodological and contextual perspectives were drawn. The research objectives were outlined followed by the value of the study.

Chapter two focuses on the literature reviewed in relation to this study. To begin with the theories anchoring this study are presented. This is followed by empirical literature in line with each of the hypotheses. The research and knowledge gaps are subsequently discussed and finally, the conceptual framework and research hypotheses enumerated.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides a review of the foundations of theories that reinforce the study and provides literature review on the study objectives and the tested hypotheses. The reviewed literature is sourced from books, scholarly articles and academic journals that provide the expected relationship amongst the study variables. The chapter further provides the conceptual model that guided the study, alongside the extracted hypotheses that guided the empirical study.

2.2 Theoretical foundation

This study reviewed the following theories pertinent to ERM, macro-environment, top management demographics and performance. These include; Contingency theory of ERM (Kaplan & Mike, 2014); Upper Echelon theory, (Hambrick & Mason, 1984), Open systems theory (Ansoff & McDonnell, 1990) and stakeholders theory (Freeman, 1984).

2.2.1 Contingency Theory

Scott (2006) while building on the propositions of Fiedler (1983) regarding contingency theory, advances that contingency theory encompasses the best way to organize depending on the situation to which the organization must relate. The position is augmented by Thompson (2003) who contributed in advancing the theory by bringing in contingency factors that impact on organizational structure by stating that, there is no one best way or approach of doing things in an organization. In further advancing this perspective, Kaplan and Mike (2014) brought in a new perspective of contingency by developing the Contingency theory of Enterprise risk management from their empirical research work undertaken between the year 2002 to 2013 across private sector organizations and advancing that Enterprise risk management practice can be effectively operationalized by matching the implementation of Enterprise risk management with the intrinsic nature of the different types of risks experienced in the organization. The core of a the Contingency theory of Enterprise risk management is based on finding the schemes of 'fit', which would lead to the anticipated performance outcomes by having a fit between an organization's Enterprise risk management practices and contingent factors such as context setting, risk identification, risk evaluation and corporate wide communication of risk management initiative to

encourage a risk-based culture (Hammond et al., 2006). Contingency theory of Enterprise risk management concludes that conditional circumstances in the organization such as the nature of top management teams and strategic responses to their external environment to mitigate on risks enable effective management of risks, which enhances organizational performance (Kaplan & Mike, 2014). In this study, contingency theory of Enterprise risk management guided the conceptualization of Enterprise risk management, which is one of the key strategic management practices implemented by the organization to enhance performance of Kenyan state-owned corporations.

Contingency perspective of Enterprise risk management has however been criticized on the basis of not clearly bringing out the other endogeneity factors of organizations, such as the role to top management in implementing Enterprise risk management and the analysis of the impact of the environment (Arnaboldi & Lapsley, 2014). Additionally, the theory has been seen to assume a constant positive relationship between Enterprise risk management and performance even in cases where the influence may not be singly attributed to Enterprise risk management (Beasley et al., 2006). Despite the fore mentioned criticisms, the proposition of the theory still necessitates empirical investigations, owing to Kaplan and Mike (2014) recommendation for further empirical investigation on the theory's advanced position, for future studies to investigate Enterprise risk management, the building blocks and better conceptualize Enterprise risk management 'fit' with performance in diverse contexts and with varying organizational variables in order to strengthen the theory's propositions.

2.2.2 Open Systems Theory

Bertalanffy (1968) is considered to be the founder and the main proponent of the general systems theory described the organization as an open system by advancing that, organization like a biological organism is made up of interacting elements and is open to and interacts with its environment. Katz and Kahn (1978) while advancing on the original views of organization as an Open system advanced that an organization is a system with boundaries that separate it from its environment. Ansoff and McDonnell (1990) built on the same view further advanced that the environment influences organizations because they depend and serve in the context of the environmental occurrences. Burnes (2004) advanced on this proposition of organizations operating as open systems and posited that organizations are both environment dependent and serving. According to Carpenter, Geletkanycz and Sanders (2004) macro environment factors are outside the physical confines of an organization and firms do not have control over them. These factors cause turbulence and uncertainty but also provide resources that sustain the organization to survival, thereby requiring organizations to consider strategic risk management as a means to mitigate the impact of environmental uncertainties while exploring available resources for survival.

The environments that organizations operate in have been found to consist of forces that are political, economic, social, technological and legal in nature (Wernerfelt, 1984). This means that as top managers develop strategies, they will be subject to macro-environment influences and will need to continuously ensure that strategic decisions take cognizance of risks being span by its environment (Ansoff & McDonnell, 1990).

Proponents of open systems theory share the perspective that an organization's survival is dependent upon its relationship with the environment (Wernerfelt, 1984). However,

opposing view against the open systems perspective advances that organizations on their own are relatively stable entities and that on the contrary, dominant organizations at times influence the environment within which they exist (Rumelt, 1979). The theory has further been criticized for its deficiency in adopting an integrated, interactional approach using multiple resource dependence strategies thus little is known about interaction of different strategic management practices such as Enterprise risk management. This creates the need to explore multiple resource dependency including the influence of organizational leadership and various strategy relationships (Kim & Lim, 1988). Open system complemented the Contingency theory of Enterprise risk management and guided the conceptualization of macro-environment influence on the relationship between Enterprise risk management and performance in this study.

2.2.3 Upper Echelons' Theory

Upper echelons' theory as postulated by Hambrick and Mason (1984) argues in the context of how top management acts as a reflection of the firm through playing an important and instrumental role towards the overall firm performance. Further, the theory goes ahead to reveal that managers' characteristics affect their decisions making towards the firm and thus the strategic management practices and actions to be adopted by the organizations to realize key goals (Henderson, Miller & Hambrick 2006). Based on this theory, TMT demographics comprise functional background, education, and age. Scholars have also encompassed tenure (Nielson & Nielson, 2013) and others gender (Marimuthu & Kolandaisamy, 2009) as comprising TMDs. In this study, upper echelons' theory sought to clarify how top management demographics influence the adoption of ERM to influence organizational performance.

The suggestions by the upper echelon theory have created much interest on scholarly work regarding the role of TMTs and performance, thus suggesting that top managers personal characteristics influence outcomes such as performance (Zenger & Lawrence, 1989). However, this theory has been criticized for its focus on ‘teams’ approach thus generating causal descriptions rather than causal explanations. Suggestion has been made to advance the proposition of the theory beyond causal description to study demographics influence on other organization variable (Carpenter et al., 2004). Upper echelons theory complemented the Contingency theory of Enterprise risk management and the Open systems theory and guided the conceptualization of Top Management Demographics influence on the relationship between Enterprise risk management and performance in this study.

2.2.4 Stakeholder Theory

Stakeholder theory advances that performance of the organization is a function of how effectively an organization meets its goals to satisfy stakeholders. It further states that the interconnected networks of stakeholders affect the decision making process and in essence effectiveness and outcome of the firm (Freeman, 1984). Shareholders are important constituent of stakeholders and profits are a critical output but not necessarily the main one, further whereas the actions of managers may serve the interest of shareholders, there are other important players whose interest must be taken care of too (Child, 1972).

Organizational performance according to stakeholders’ theory is regarded as the scope to which the organization satisfies the interest of its stakeholders (Radner & Shepp, 1996). This theory has caused the evolution of performance measurement from the traditional focus on profits, which are returns on assets to include other non-financial

and intangible measures such as customer-centric perspective and other internal processes (Kaplan and Norton, 1996). Measurement of performance has evolved over time from focusing on financial measures despite its continuing relevance to include Sustainable Balanced Score Card approach (Pfennigstorg, 1977) including contemporary, intangible and externally oriented measure (Kinuu, 2014). Stakeholders' theory has been criticized for its simple description that does not give credence to the variability in salience and the impact of the various stakeholders and their heterogeneity that caused their impact to the organization to be felt in varying extents (Neville, Bell & Whitwell, 2004). The theory augmented the Contingency theory of Enterprise risk management, Open systems theory and Upper echelon theory by operationalizing organizational performance along the desired result-based performance management approach, anchored on the propositions of the Balanced Score Card model.

2.3 Enterprise Risk Management and Performance

There has been paradigm shift in the recent years, which has occurred with regard to the perception of risk management as far as strategy formulation and implementation is concerned. Risks are no longer evaluated at individual perspective but on the basis of ERM with the aim to identify (context setting), assess (risk assessment), monitor (risk evaluation) and providing feedback (communication) (Meulbroek, 2002). Enterprise risk management is all about how opportunities are recognized and risks mitigated (COSO, 2004). According to Kleffner et al. (2003), integrating risk in strategy formulation and implementation aims at increasing competitiveness, success of the business and enhanced strategic positioning. The crucial effect of ERM is a significant consideration which arose from the financial outcry of the early 21st century, however, the effects of integrating risk in strategy formulation and implementation have only recently been explored (Herbane, 2010).

ERM increases value when it helps improve performance (Ojasalo, 2009). However, majority of the studies have been performed on publicly listed firms with the focus of observing if financial markets are attributed to value of ERM though most have obtained mixed or rather inconclusive findings (Brustbauer, 2014). Williams (2005) argues that although ERM is seen as one of the crucial business tools strategies organizations are continuously adopting, most businesses are yet to integrate the critical elements of ERM, to realize performance (Venkatraman & Ramanujam, 1986). This could be attributed to the critique that ERM cannot identify and address all organizational uncertainties (Hammond et al., 2006) and further that it is a fairly recent strategic management practice whose impact is yet to be fully established (Herbane, 2010).

According to Pfennigstorg (1977) performance contracting is viewed by governments globally as a useful tool for enunciating clarity in definition of objectives. Implementing of public sector reforms was started in Kenya in 1993 with the purpose of improving service delivery by the public sector. There have been three types of reforms implemented in three phases targeted at revamping state corporations including newer interventions such as introduction of revamped performance contracting in the year 2003 and institutionalization of Enterprise risk management in 2009 (KIPPRA, 2009). This was geared towards improving efficiency and effectiveness of public affairs. Performance contracting is based on Results Based Management guided by target setting which measures indicator such as financial stewardship that includes; revenue collection, budget absorption and cost cutting and non-financials comprising of; service delivery, customer satisfaction implementation of strategic plan, compliance with legal, regulatory and statutory obligations (GoK, 2013). Performance of state

corporations takes the cycle of planning and periodic monitoring and evaluation that results into the SCs ranking (Kobia & Mohamed, 2006).

Beasley et al (2006) advocate for integration between both non-financial and financial organizational objectives with risk management together with individual responsibilities towards the entity's strategy. This is actualized through the definition and monitoring of definite responses as per the strategies in place to ultimately enhance likelihood of achieving the overall strategic objectives and targeted goals (Kaplan & Norton, 1996). Looking at the balanced scorecard approach, strategy and corresponding measurements are distributed across four areas: financial, customer, internal, and learning (Kennerly & Neely, 2003). According to Kim and Lim (1998), financial goals typically differ depending on the maturity level and various practices adopted by respective organization including practices such as ERM, aimed at improving the overall performance of the organization. ERM improves performance by its focus on potential events as opposed to past performance (Brustbauer, 2014).

2.4 Enterprise Risk Management, Macro-Environment and Performance

Organization as an open system operates within an environment characterized by turbulence in view of the fact that organizations are environmental dependent and environmental serving making strategy the link between an organization and its environment (Child, 1972). According to Machuki and Aosa (2011), external environment is one of the key determinants of organizational outcomes and accounts for the variation in organization performance. There is a continuous decision-making process within an environmental context due to dynamism in environmental occurrences and other unforeseen forces prompting continuous assessment of the strategies to be applied any time a change in the environment occurs (Khandwalla,

1999). Accordingly, Enterprise risk management implementation in organizations may consist of policing an organization only for risk compliance limits and other risk policies and in other organizations it helps the learning processes of uncertainties, their strategy and the macro environment of the organization (Kaplan & Mikes, 2014). The macro-environment factors have been found to include; economic, political, social, technological, ecological and legal factors (Pearce, et.al., 2012).

The moderating or rather the influencing role of economic, political, social, technological, ecological and legal factors on the association or relationship that may exist between ERM and performance has obtained minimal attention in strategic management research (Lenz, 1980). The few empirical studies that have looked at this relationship have produced contradictory results (Grant, 1998). Organizations operate in an environment, which they have no control over, therefore, organizational may face challenges which could result to sudden and extensive changes that might overwhelm the adaptive abilities of the organizations at hand and may surpass the comprehension of the organization (Machuki & Aosa, 2011). Organizations' that operate in a stable environment tend to adopt less of risk management practices while those operating in turbulent environment tend to adopt more comprehensive Enterprise risk management practices (Deloach, 2000).

Conceptual arguments have advanced that firms may gain from adopting a risk management culture to improve performance (Belanes & Hachana 2009). Strategy formulation entails alignment of strengths and weakness with challenges and opportunities in an organization's environment (Hitt, et. al., 2011). The role of strategic risk management to mitigate on the occurrences associated with economic, political, technological, social, ecological and legal factors is important. Indeed, the association between environmental dynamism and performance may be moderated by strategic risk

management practices adopted by individual organizations (Gilley et al., 2002). How an organization responds to happenings in the external environment, including choice of measurement tools and systems will inform the performance of that organization (Porter, 1980). This therefore, creates the need to empirically fill the gap of the influence of different aspects of macro environment on performance. The strategic risk management practices adopted by an organization may be moderated by the impact of this environmental dynamism and the subsequent influence on performance (Kim & Lim, 1988).

2.5 Enterprise Risk Management, Top Management Demographics and Performance

The performance of the organization is a reflection of the efforts of top managers and the demographics whose actions are central and crucial to the organization (Michel & Hambrick, 1992). Top management demographics that include age, education, gender, functional background and tenure (Hambrick & Mason, 1984) have been argued to influence the variations in organizational decisions and overall actions to be adopted and implemented in the entities (Mkalama, 2014). This is because demographic features of top managers are interrelated with values, rationality, perceptions and cognitive bases, which in turn affect the managers' decision-making process (Nielson & Nielson, 2013). Functional background, tenure, education, age, gender and experience are believed to influence how most organizations perform (Dutton & Duncan, 1987). Various strategic management studies have had varied results on the influence of top management's age and performance of the organization (Marimuthu & Kolandaisamy, 2009).

Age has been found to enhance communication frequency in a wide range of experiences and perspectives among members of a team and is related to organizational performance (Zenger & Lawrence, 1989). Younger managers for instance have been argued to be inclined to consider risk in formulating and implementing strategic decisions (Dutton & Duncan, 1987). Education background has been established to positively influence performance (Katz, 1982). Further, some scholars have contended that top management teams with similar organizational tenure are inclined to exhibit a heightened level of team integration and cohesion giving impetus to flexibility and ability to consider risk management. However, teams with extensive homogenous tenure may have higher hesitancy towards adoption of risk management practices (Wiersema & Bantel, 1992). It is however noted that on the contrary, scholars such as Marimuthu and Kolandaisamy (2009) have argued that gender diversity has no relationship with performance.

Top management demographics play an essential role in determining and shaping the actions of the strategies and the overall outcome of the organization. The idea of taking risks by the managers may result to competitive advantage and the performance of the organization in general. Therefore, top managers in organizations should consider adoption of integrated strategic risk management practices so as to boost the performance of the organization (Belanes & Hachana, 2009). The study by Mutuku (2012) established that decision quality by top management significantly affects the organizational aspects relating to internal business processes, learning and growth. Muchemi (2013) established that to be able to recognize the available opportunities depends on individual's ability, capability and the skills and knowledge particularly in developing novel solutions. The organizational nature and effectiveness in the responses will always vary with how and which ways the top management may trigger

and interpret strategic issues and responses. The characteristic nature of the team mandated and expected to exhibit the reactivity to adopt and implement strategic risk management include willingness to take risk, receptivity to change, diversity in information sources and the creative and innovative nature in decision-making (Brustbauer, 2014). Willingness to consider risks is most important because optimizing firm strategy involves risks (Dutton & Duncan, 1987). TMD might explain more variance in the level of adoption of risk management in decision making than would be presumed (Hambrick & Mason, 1984).

Many organizations are likely to feel and notice changes in the organizational operations and culture as ERM adoption and implementation progresses. Top managers are responsible for managing and controlling risks because they are held accountable (Belanes & Hachana, 2009). Organizations whose performance is monitored and measured are believed to out-perform and possess higher stock prices as opposed to those which are not measured (Kennerley & Neely, 2003). The biggest obstacle in adopting a measurement scale is reaching a conclusion and consensus on what should be measured and not to be measured, therefore implementing an appropriate performance measurement system ought to ensure that risks are aligned to strategies and objectives. There continues to be lack of consensus on how to measure performance due to continuing metamorphosis of the interest. This has led to evolution of performance over time yet this scenario is unlikely to stabilize but get even more intricate in future as expectations of stakeholders about organizations' economic, social, legal and ecological responsibilities evolve (Hubbard, 2009). Most recently, consideration by top management to integrate risk management to strategy and performance is being given high consideration (Verlag, 2014).

According to Adam and Campbell (2005) argument, Enterprise risk management is believed to be a way of leveraging the significance of organizational investment into shareholders' value. Research has further availed that integrating strategy and risk leads to competitive advantage and performance in general. Bowman (1980) posits that decision makers may have no or little incentive or stamina to entertain or rather allow risk when performance exceeds the referent of performance since the assurance is taken to be adequate performance. On the other hand, when the referent of performance falls short, then greater risk may be considered by decision makers to improve performance. There are mixed arguments in literature regarding the effect of functional background of TMTs on performance. Similarly, there are inconclusive results on the effect of top management tenure on performance. There is yet to be a consensus among researchers regarding the combination of TMD that leads to high organizational performance, thus making this study area to be of high interest to researchers (Carpenter et al., 2004).

2.6 Enterprise Risk Management, Top Management Demographics, Macro-Environment and Performance

Enterprise risk management as a practice is gradually evolving to meet the growing requirement of enhancing effectiveness in organizations (Verlag, 2014). Firms have in the recent past commenced the adoption of more comprehensive approach in implementing Enterprise risk management despite the adoption being seemingly less in non-financial institutions (McShane & Rustambekov, 2011). Risk management has developed into an essential function for top management in the increasingly turbulent environment. Traditionally, firms have been practicing silo-based risk management strategies that only focus on certain aspects of the wider corporate risk management framework (Ulrich & Wiersema, 1989). The upper echelon perspective advanced the relationship between TMT demographic characteristics, strategic decision such as

consideration of strategic risk management and performance (McWhorter, Matherly, & Frizzell, 2006).

Hambrick and Mason (1984) ignited the debate in strategic management literature on the central part that TMTs pay in devolving strategies that will align organizations with the environment and consequently influence performance. The argument is that education, gender, functional background, tenure and age reflects the underlying cognitive, and affective managerial characteristics, predict the capability to adopt Enterprise risk management and hence influence performance. Organizations both respond to and operate upon the context in which they are embedded. Top management teams are critical in understanding these contexts and creating the linkage between the organization and its environment. According to Culp (2002), it is therefore critical to explore ways in which non-financial companies can implement Enterprise risk management.

Thompson (1967) argued that adoption strategic decisions such as the implementation of risk management is influenced by the external environment within which an organization operate, owing to the fact that the macro environment either directly or indirectly impacts on organizational performance. It is for this reason and the view of organization operating as an open system, that the primary task of top management focuses on the development of strategies that enhance the fit between the organization and its macro environment (Pearce & Robinson, 2003). Top Management must therefore keep re-examining the macro environment to develop systems such as risk management to support already identified strategies for the organization's survival (Miller, Linda, & William, 1998). Top management mental models influence the decision to adopt Enterprise risk management (Nielson & Nielson, 2013). The role of the organization's top management demographics in influencing strategic response

such as adoption of risk management, to the happenings in its external environment to enhance the achievement of organizational objectives can be further researched to establish its influence (Schendel & Hofer, 1979).

2.7 Summary of Knowledge Gaps

Enterprise risk management as a strategic management practice is seemingly gaining importance as regards to the mitigation of risks to enhance organizational performance. This is arising from the ever-increasing pressure that the organizations are facing from the broader scope of risks, key among these being the turbulent macro environment factors. Despite this assertion, the finding from the review of empirical research on the relationship between Enterprise risk management and performance of state corporations and the influence of macro environment and top management demographics on this relationship was unclear and characterized by inconsistencies and inconclusive findings. This resulted to the establishing of contextual and conceptual knowledge gaps that the study undertook to investigate.

Table 2.1: Summary of Knowledge Gaps

Study	Focus	Methodology	Findings	Gaps	Focus of Current Study
Abdel-Azim and Abdelmoniem (2015)	Analysis of effect of ERM and disclosure on firm value (Egypt)	Descriptive survey - using Tobin's Q ratio, logistic model and capital asset pricing model	A positive relationship exists between and firm value and ERM	There exists conceptual limitation as study did not consider effect of other variables other than ERM.	This study introduced influences of macro-environment and TMD on the association between ERM and performance in SCs in Kenya.
Sunjka and Emwanu (2015)	Analysis of ERM practices and performance of manufacturing SMEs (South Africa)	Case study with semi-structured interview and observation	External environment poses higher risk than internal environment	Methodological limitation as study focused on one SMEs firm therefore universal validity may not apply.	This study adopted a cross section survey design to enhance the generalization of findings of the study
Yegon (2015)	To establish the influence of ERM determinants on financial performance of NSE listed firms (Kenya)	Cross Sectional survey of companies listed on NSE	Effective management of ERM determinants has influence on financial performance of listed firms in Kenya	There are contextual limitations as the study only focused on financial performance of listed firms.	This study focused on government SCs in Kenya and introduced the variable of top management demographics and how they affect the association between ERM and performance
Brustbauer (2014)	Analysis of ERM in SMEs to establish a structural model (Australia)	Cross-sectional descriptive survey of firms found in Austrian Chamber of Commerce database. Administered structured questionnaires and conducted cluster analysis	ERM Implementation is primarily driven by firm characteristics and ability to assess its environment	Contextual limitation as the study only focused on SMEs in Australia.	Study focused on Kenyan SCs and introduce the variable of TMT demographic and Macro Environment
Lundqvist (2014)	To determine the integral component of ERM based on firm implementation of ERM dimensions. (Sweden, Norway, Finland, Denmark).	Cross-sectional census survey of firms listed on major Nordic stock exchanges. Administered structured and conducted telephone interviews on individuals responsible for ERM. Applied Exploratory and Confirmatory Factor Analysis for data analysis.	Identified four underlying factors i.e. pillars of ERM implementation	Conceptually, study did not consider other variables such as TMD and Macro Environment Contextual limitations as the study focused on Nordic countries.	This study introduced the top management demographic and macro environment dimensions on the Kenyan State-Owned Corporations

Table 2.1: Summary of Knowledge Gaps (Cont'd)

Study	Focus	Methodology	Findings	Gaps	Focus of Current Study
Kinuu (2014)	Relationship between TMT psychological characteristics, team processes, institutional environment and performance (Kenya)	Cross Sectional survey of companies listed on NSE	TMT unobservable variables influence performance	There are contextual concerns as study is limited for financial sector. Conceptually, study did not focus on observable TMT demographics which are more objective.	This study introduced TMT demographics as a variable that influences performance. The study also focused on the public sector.
Awino, (2013)	Effect of diversity of TMT and quality decisions on performance in the service industry (Kenya)	Cross Sectional survey of Commercial Banks in Kenya	Diversity of the TMT has no significant influence on performance	Conceptual limitation as the role to strategic risk management to the relationship was not considered. Contextually the study is limited to service industry.	The study focused on SCs and will introduce on the ERM and Macro-environment as variables influencing performance
Muchemi (2013)	Diversity of TMT and performance of commercial banks (Kenya)	Descriptive survey of 43 commercial banks in Kenya. Target respondents were senior managers. Hypothesis testing was done	Different demographic factors have different magnitudes and direction of influence on performance. Diversity of TMT has both positive and negative effect on firm performance	The study is contextually restricted to commercial banks. Conceptually, the study only limited to TMT and performance.	The study focused on ERM and Macro-environment as variables influencing performance in SCs
Waweru and Kisaka (2013)	Examined levels of implementation of ERM and significance of factors affecting level of implementation in firms listed on NSE (Kenya)	Cross-sectional survey - using multivariate regression	ERM was found to be viewed as a strategic business initiative. There is a relationship between ERM implementation and company value	The study is limited to examining ERM level of implementation among listed firms thus introducing conceptual limitation.	This study introduced influences of macro-environment and TMDs on the relationship between ERM and performance in Kenyan State-Owned Corporations

Table 2.1: Summary of Knowledge Gaps (Cont'd)

Study	Focus	Methodology	Findings	Gaps	Focus of Current Study
Odundo (2012)	Context of the environmental context, strategic plans implementation and performance of SCs in Kenya	Cross sectional survey design using multiple regression for data analysis	Political goodwill and support have a significant effect on the relationship between scope of strategy implementation and financial performance	There is conceptual limitation as study did no consider other variables such as ERM and did not focus on both non-financial and financial aspects of performance.	This study included non-financial and financial performance measurement indicators applicable to SCs in Kenya
Machuki and Aosa (2011)	Influence of external environment on performance of publicly listed companies in Kenya	Cross Sectional survey design using multiple regression for data analysis	There exists a relationship between firm performance and external environment	Only included firms listed in the NSE introducing methodological limitations that do not allow for generalization of findings.	This study included other non-financial and financial performance measurement indicators applicable to Kenya government SCs
Irungu (2007)	Influence of TMT on performance of publicly quoted companies (Kenya)	Study based on 2001-2005. Survey of publicly listed firms in Kenya (different sectors).	TMT Characteristics have diverse effects on performance in different sectors	There are conceptual and contextual limitations as study was limited to the effect of TMT financial characteristics on firms listed on NSE	This study focused on the influence of TMD, ERM and microenvironment on performance of SCs in Kenya
Rao (2007)	Assessment of ERM; Importance, Identification and Measurement of ERM (Dubai)	Survey of business executives in Dubai targeting 100 businesses across various sectors. Administered structured questionnaires	Most organizations are applying some features of ERM. However, more needs to be done by applying integrated strategic enterprise risk management process.	There are contextual limitations as the study was limited to Dubai therefore findings are not generalizable. Conceptually, the study is limited to only ERM implementation.	This study introduced the top management demographics and macro environment dimension and focused on the Kenyan State Owned Corporations

Source: Author (2019)

2.8 Conceptual Framework

Conceptual framework explicates the association among related concepts and elucidates the connections between the study variables (Ravitch & Riggan, 2012). This study's conceptual framework was formulated based on the theoretical literature and empirical review. ERM dimension was theorized as the independent variable to comprise of indicators such as; context setting; risk assessment; risk evaluation and communication. Top management demographics was conceptualized as a moderating variable with indicators including: tenure in organization, functional background, age, education and gender. Macro-environment was conceptualized as moderating variable and considered indicators include, economic, ecological, social, political and legal and technological factors. Finally, performance was conceptualized as the dependent variable with two major indicators namely; financial and non-financial.

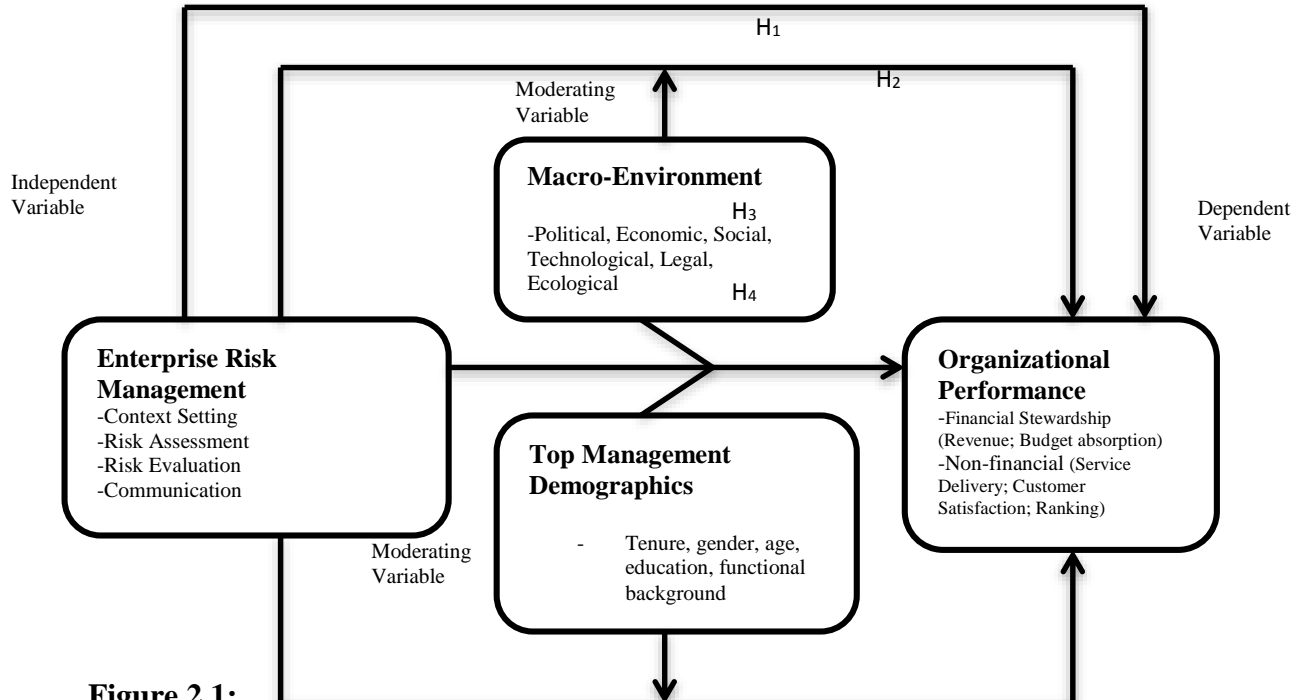


Figure 2.1:
Conceptual Framework

Source: Author (2019)

2.9 Conceptual Hypotheses

From the relationships in the conceptual framework in Figure 2.1, the following hypotheses were advanced.

H₀₁: Enterprise risk management has no significant influence on performance in Kenyan state-owned corporations

H₀₂: Macro environment has no significant moderating influence on the relationship between enterprise risk management and performance in Kenyan state-owned corporations

H₀₃: Top management demographics has no significant moderating influence on the relationship between enterprise risk management and performance in Kenyan state-owned corporations

H₀₄: Enterprise risk management, Top management demographics and Macro-environment have no significantly joint influence on performance of Kenyan state-owned corporations

2.10 Chapter Summary

Chapter two presented literature review by the study comprised of theoretical and empirical literature. The chapter started with stating the theoretical underpinnings of the study whereby the contingency theory of enterprise risk management, open systems theory, upper echelons theory and stakeholders theory were discussed. the variables supported by these theories were set out for each theory and the limitations associated with each theory described.

The empirical literature relating to the four objectives and hypotheses of interest was then advanced. Studies showing the direct influence of Enterprise risk management on

organizational performance were outlined alongside studies aligned to the moderating influence of Macro environment and Top management demographics respectively. Studies relating to the joint effect were thereafter considered. Subsequently, a summary of the knowledge gaps identified was then tabulated before the conceptual framework was presented. Finally, the conceptual hypotheses were enumerated.

Chapter three presents the research methodology adopted in this study. It begins by setting out the research philosophy followed by the research design. The population of study is then discussed and the sampling design presented. The procedures relating to data collection are subsequently discussed alongside the tests applied to check for reliability and validity of data collection instruments. The study variables are then operationalized, followed by techniques of data analysis and tests used for diagnosing multiple regression assumption.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter was set to deliberate and highlight the study's methodology. The section captures the philosophy of the research, the employed design and population that was targeted. The section also highlights the data collection methods, measurements of validity and reliability and how variables pertaining to the study were operationalized. Finally, the diagnostic and data analysis techniques have also been captured.

3.2 Research Philosophy

There are two key schools of research philosophy namely the positivist and phenomenology. In addition to the two extreme schools, there are also the pragmatism and realism schools of research philosophy (Nachmias & Nachmias, 2004). Positivism is an epistemological philosophy that claims that observation is based on an objective criterion rather than a subjective one, and also that the observer is independent from what is being studied (Mugenda & Mugenda, 2003). Positivism is objective, deductive and aims at falsifying research hypothesis and is mainly concern with theory testing. It is further guided by the philosophy that, one reality exists, though as a result of limitations of humanity it may be known imperfectly and within the context of probability can be discovered by researchers (Saunders et al, 2007).

Conversely, phenomenology is about theory creation or formulation. It focuses on the immediate experience where the researcher draws meaning by interpreting experiences that are observed during the researchers' involvement in the phenomena (Nachmias & Nachmias, 2004). Positivism approach is theory testing and uses quantitative approach

as opposed to phenomenology, which is theory building and adopts a qualitative approach (Saunders et al, 2007).

This study was anchored on the positivist research philosophy, since it was about theory testing. Similar studies that have used the same philosophy with success are Machuki (2011), Mkalama (2014) and Odundo (2012).

Positivistic research philosophy is based on quantitative information collected from respondents. This implies that, in the event that wrong feedback is gathered from target respondents, conclusion and inferences can be drawn based on wrong data. This can occur in any approach adopted since the researcher depends on the findings from respondents. However, the researcher must remain objective by being detached from the participants (Haworth, 1984). Despite this challenge, the researcher used positivism and this did not compromise the research, since its characteristics of generalization, prediction, validity and reliability mitigated on the challenges. The findings of the study were therefore not compromised.

3.3 Research Design

Research design is the blueprint that guides the researcher in the different stages of the research. Research design defines the extent of researcher's participation, the type of data required, the nature of analysis to be adopted and the kind of investigation to be undertaken (Nachmias & Nachmias, 2004). This study adopted a Cross sectional survey research design, which the researcher found to be appropriate, considering the purpose of the study, scope, researchers involvement and time period over which data was to be gathered. The purpose of the study was to examine relationships among variables at one point in time.

Cooper and Schindler (2011) states that cross-sectional investigations permit the researcher to determine whether there exists significant associations amongst variables and also determines the strength of these associations. In using cross sectional survey design, data gathered represents a snap shot of the happenings at a certain point in time. Studies by Mwangi (2018), Mutuku (2012) and Irungu (2007) successfully applied cross sectional survey design in data collection, testing hypothesis and drawing conclusions.

3.4 Population of the Study

The unit of analysis was government owned state corporations in Kenya. These corporations are classified into: development or promotional; regulatory; revenue collection; cultural and social services; commercial; educational institutions. According to GoK (2013) there are 187 state corporations spread across the twenty ministries (Appendix II).

Due to the dynamism and environmental changes, the number of state corporations is likely to keep changing as new ones are created and others merged or discontinued altogether depending on their purpose, performance and government development agenda. The target respondents were the chief executive officer (CEOs) or their authorized chief risk, chief human resource officer or corporate planning officer, depending on the structure of the particular Parastatals (GoK, 2013).

3.4.1 Sampling Technique

The classification of state corporations was based on broader clusters of research institutions and executive agencies, agencies of regulations, commercial agencies, agencies of strategic functions, education training both universities and tertiaries (GoK,

2013). Out of the population of 187 state corporations, 34 are Agencies that are purely commercial, 21 are agencies that deal with strategic functions, 62 are agencies that are executive in nature, 25 are agencies that deal with regulations and 45 are institutions that undertake research, universities in public category and training and tertiary level. The study used probability-sampling design and adopted the Proportionate Stratified random sampling approach. Choice of technique was guided by the fact that Stratified sampling divides a heterogeneous population into distinct categories or strata of independent sub population from which individual elements can be randomly selected, thus increasing statistical efficiency (Trochim, 2000).

The sample size was derived using Yamane (1967:886) formulae. The formula was stated as follows;

$$n = \frac{N}{1+N(e)^2} \dots\dots\dots(i)$$

Where n=sample size; N=Population size and e= 95% confidence level.

On the basis of this formula the sample size was 127, which was 67.9% of the research population.

The sample size was thereafter distributed across each of the sub-samples on the basis of their initial proportion as shown at Table 3.1 below. The applicability of the approach was chosen due to ease in carrying out and its high efficiency in statistics (Zikmund et al, 2013).

Table 3.1: Sample Size Determination

Category	Corporations	%	Sub-Sample
Executive agencies	62	33	42
Public universities, research institutions tertiary and vocation training institutes	45	24	31
Commercial agencies	34	18	23
Regulatory agencies	25	13	17
Agencies with strategic functions	21	11	14
Total	187	100	127

Source: Researcher (2019)

Simple random sampling was thereafter used to select the respondents that would participate in the study within the strata. According to Trochim (2000) simple random sampling guarantees that every element in the population has an equal probability of selection into the sample and hence assures that the sample selected is the most typical of the population. Simple random sampling hence reduces sampling bias. Table of random numbers was used to select the sample where the state corporations in each stratum of the sampling frame were assigned a unique number.

3.5 Data Collection

The study relied on primary data that was collected through a structured questionnaire. The structured questionnaire was developed with closed questions that covered the objectives and hypothesis formulated for the study. The design of the questionnaire was also guided by the reviewed literature as well as theories that anchored the study. According to Nachmias and Nachmias (2004) individuals who are knowledgeable on issues being studied are well placed to be respondents.

The drop and pick method was applied to collected primary data. Effectively trained research assistants who had the capacity and knowhow to administer the questionnaires aided the process of data collection. The questionnaire had five (5) sections. Section I

was intended to collect general information of the state corporations and respondents. Section II collected data on ERM, Section III on macro-environment, Section IV on top management demographics and Section V on State Owned Corporations' Performance.

3.6 Reliability Test

Reliability has been defined according to Mugenda & Mugenda (2003) as the measurement of the extent an instrument under the research is yielding the results after trials have been done repeatedly. This is measured or rather estimated by use of a ratio called Cronbach's Alpha which has the capability in assessing the correlation average of items in a test or the internal consistency measure.

The coefficient values of the Cronbach's alpha ranges from zero (0) to one (1) whereby the closer the coefficient is to 1 the more consistent the research instrument is internally, meaning the items on the instrument correlate very highly within themselves thus existence of the consistency in measuring the intended concepts (Mugenda & Mugenda, 2003). Nunnally (1978) recommends 0.7 coefficient as adequate. This study applied the 0.7 cut off point to test for reliability.

3.7 Validity Test

Validity is the extent to which the processed information is the true representation of the phenomenon of the study. It represents the argument that an instrument should yield results precisely to measure the intended objective by enabling the researcher to hit a bulls' eye of the objective in the interest of the population of the study in general (Mugenda & Mugenda, 2003).

Both construct validity and content validity were used in testing the measures for the variables in this study. Pretesting was conducted on the questionnaire to ascertain relevance to the study in production of accurate results. A pilot test was conducted on

two (2) respondents from each sub-sample who were purposively selected, to identify and overcome any potential challenges to administer the instrument. The objective of the pilot test was to estimate the length of the survey, gauge the experience of the respondents after the survey, evaluate if their understanding of the questions was consistent with what the researcher sought to achieve. Thereafter, ambiguous, unclear and irrelevant questions were expunged.

3.8 Operationalization of Study Variables

This section discussed the operationalization of the variables of this study as shown in Table 3.2. The variables included; ERM, TMD, Macro environment and performance of SCs in Kenya. ERM was operationalized according to Lundqvist (2014) and COSO (2004) as Context Setting; Risk Assessment; Risk Evaluation; Communication whereas Top management demographics was operationalized according to Nielson and Nielson (2013) as Age, Education, Functional Background, Tenure, Gender. Macro environment was operationalized according to Pearce and Robinson (2003) as Political, Economic, Social, Technological, Legal, Ecological whereas performance was operationalized according to Pfennigstorg (1977) and Hubbard (2009) using non-financial and financial measure and Kenya's 9th PC Guidelines (2009).

Table 3.2: Operationalization of Study Variables

Variable	Operational Indicators	Supporting Literature	Measurement Scale	Questionnaire Items
Enterprise risk management (Independent Variable)	Context Setting; Risk Assessment; Risk Evaluation; Communication	Lundqvist (2014) COSO (2004) ISO (2009) McShane et al. (2011)	5-point Likert type Interval scale	Section II Question; 8
Macro environment (Moderating Variable)	Political; Economic; Social; Technological; Legal; Ecological	Machuki & Aosa (2011) Pearce & Robinson (2003) Mkalama (2014) Hitt et al (2011)	5-point Likert type Interval scale	Section III Question; 9
Top management demographics (Moderating Variable)	Age; Education; Functional Background; Tenure; Gender	Hambrick & Mason (1984) Mutuku (2012) Irungu (2007) Nielsen & Nielsen (2013)	Nominal scale 5-point Likert type Interval scale	Section IV Questions; 10-15 Question; 16
Performance of SCs in Kenya (Dependent variable)	Non-financial; (Customer Satisfaction, Service delivery, Ranking) Financial & Stewardship; (Budget absorption/ Revenue Collection)	Pfennigstorg (1977) Hubbard (2009) GoK (2009)	Interval scale	Section V Questions; 17-21

Source: Researcher (2019)

3.9 Diagnostic Tests

The study conducted specification tests that are required to confirm that the data satisfies the assumptions of regression analysis. This included testing the assumption of linearity of data, that is, the data was collected from a population that relates to the independent and dependent variable in a linear fashion. Patton (2002) pointed out that the chance of non-linear relationships is high in the social sciences, thus it's essential to test for linearity. Normality test was conducted to ensure that normality assumptions were not violated at analysis stage. Normality of data was established using graphical or numerical method. According to Altman and Bland (1996) neither the numerical nor graphics individually provide conclusive evidence of normality. Therefore, the study established normality of the data for each dependent variable both numerically and graphically. Descriptive statistics were performed to derive the means, median, standard deviations, skewness and kurtosis for describing normality of the data. Altman and Bland (1996) observes that a normally distributed variable should have skewness and kurtosis near zero with mean closer to median.

Multicollinearity is the unacceptable high level of association between any two independent variables making it hard to separate the effects of the independent variables individually. The test for multi-collinearity was performed using tolerance and Variance Inflation Factors (VIF). Keith (2006) observes that small values for tolerance and large VIF values show the presence of multicollinearity. The acceptable range of $CI < 30$, $VIF < 5$, and tolerance > 0.2 were applied to test multi-collinearity. The study tested for homoscedasticity using Levene's t test of variance homogeneity at the significance level of $p < 0.05$. The violation of homoscedasticity (heteroscedasticity) would be evident if the error term differs across different values of the dependent variable. Low heteroscedasticity has little effect on significance tests but high

heteroscedasticity weakens and distorts the regression results thus increasing likelihood of committing type I error which is the rejection of a true hypothesis (Tabachnick & Fidell, 2007).

3.10 Data Analysis

This study used both descriptive and inferential statistics (frequency distributions, mean scores, standard deviations and percentages). These assisted in providing a description of the study variables and to establish the underlying features of the relationships between ERM, macro environment, TMD and performance of Kenyan state corporations. Mugenda and Mugenda (2003) contend that descriptive statistics provide the basic features of the data collected. Inferential statistic techniques used included, simple linear regression, multiple linear regression and stepwise multiple regression analysis. All the statistical tests were conducted at five percent significance level.

The researcher used simple regression analysis for H_{01} to establish the relationship between ERM and performance of Kenyan state corporations. For H_{02} , and H_{03} , stepwise multiple regression analysis was applied to test the moderating effect of macro environment on the relationship between ERM and performance of Kenyan state corporations (H_{02}); and the moderating influence of top management demographics on the relationship between ERM and performance of Kenyan state corporations (H_{03}). Further, multiple regression analysis was used to assess the joint effect of ERM, TMD and macro environment on the performance of Kenyan state corporations (H_{04}).

Table 3.3: Summary of Objectives, Hypotheses and Analytical Model

Objective	Hypothesis	Analytical model	Interpretation
-----------	------------	------------------	----------------

To establish the influence of ERM on performance in Kenyan state-owned corporations	H₀₁: ERM has no significant influence on performance in Kenyan Owned State Corporations	Simple Regression analysis $Y_{01} = \alpha + \beta_1 X_1 + \varepsilon$ Y_{01} = Performance of state corporations. α = constant (intercept), β_1 coefficient X_1 = Context setting, Risk Assessment, Risk Evaluation, Communication ε_1 = Error term	R^2 depicts model fitness and also explains the changes in dependent variable. β_1, β_2 and β_3 are coefficient explaining the influence of a unit change in each of the enterprise risk management constructs on the performance. P-value, F-ratio and t-statistic explains the significance of the model constructs.
To determine the effect of the macro environment on the relationship between ERM and performance of SCs in Kenya	H₀₂: Macro environment has no significant moderating influence on the relationship between ERM and performance in Kenyan Owned State Corporations	Stepwise Regression analysis $Y_{02} = \alpha + \beta_1 X + \varepsilon$ $Y_{03} = \alpha + \beta_1 X + \beta_2 W + \varepsilon$ $Y_{04} = \alpha + \beta_1 X + \beta_2 W + \beta_3 X.W + \varepsilon$ α = constant (intercept), $\beta_1, \beta_2, \beta_3$ = coefficients Y_{02}, Y_{03} and Y_{04} = Performance ; X = Enterprise risk management, W = macro environment ε = Error term; $X.W$ = Enterprise risk management and macro environment interaction	R^2 depicts model fitness and also explains the changes in dependent variable. β_1, β_2 and β_3 are coefficient explaining the influence of a unit change in each of the enterprise risk management and macro environment constructs on performance. P-value, F-ratio and t-statistic explains the significance of the model constructs.

Table 3.3 Summary of Objectives, Hypotheses (Cont'd)

Objective	Hypothesis	Analytical model	Interpretation
-----------	------------	------------------	----------------

<p>To determine the influence of the top management demographics on the relationship between ERM and performance in Kenyan state-owned corporations</p>	<p>H₀₃: Top management demographics has no significant moderating influence on the relationship between ERM and performance in Kenyan Owned State Corporations</p>	<p>Stepwise Regression analysis $Y_{05} = \alpha + \beta_1 X + \varepsilon$ $Y_{06} = \alpha + \beta_1 X + \beta_2 Z + \varepsilon$ $Y_{07} = \alpha + \beta_1 X + \beta_2 Z + \beta_3 X.Z + \varepsilon$ $\alpha = \text{constant (intercept)}$, $\beta_1, \beta_2, \beta_3 = \text{coefficients}$ Y_{05}, Y_{06} and $Y_{07} = \text{Performance}$; $X = \text{Enterprise risk management}$, $Z = \text{Top management demographics}$ $\varepsilon = \text{Error term}$; $X.Z = \text{Enterprise risk management and top management demographics interaction}$</p>	<p>R^2 depicts model fitness and also explains the changes in dependent variable. β_1, β_2 and β_3 are coefficient explaining the influence of a unit change in each of the enterprise risk management and top management demographics constructs on performance. P-value, F-ratio and t-statistic explains the significance of the model constructs.</p>
<p>Establish the joint effect of ERM, top management demographics and macro environment on the performance of SCs in Kenya</p>	<p>H₀₄: ERM, Macro-environment and Top management demographics have no significant joint influence on performance in Kenyan State-Owned Corporations</p>	<p>Multiple Regression analysis $Y_{08} = \alpha + \beta_1 \text{ERM} + \beta_2 \text{ME} + \beta_3 \text{TMD} + \varepsilon$ $Y_{08} = \text{performance}$ $\alpha = \text{constant (intercept)}$ ERM = enterprise risk management TMD = Top management demographics ME = macro environment $\beta_1, \beta_2, \beta_3$ are the coefficients ε is the error term</p>	<p>R^2 depicts model fitness and also explains the changes in dependent variable. β_1, β_2 and β_3 are coefficient explaining the influence of a unit change of enterprise risk management, macro environment and top management demographics on performance. P-value, F-ratio and t-statistic explains the significance of the model constructs.</p>

Source: Author (2019)

3.11 Chapter Summary

This chapter dealt with the research methodology applied in the study. The study's research philosophy and research design were also discussed. The study population, sampling design and the methods of data collection were also discussed. Further an explanation was given of the cross-sectional survey design used because the data was collected at one point in time across several Kenyan state corporations. The operationalization of the study variables was discussed in detail in order to define the variables into measurable factors. Literature supporting the operationalization was also presented. The operationalization of the variables was presented in Table 3.2. Finally, data analysis techniques were discussed and the objectives, analytical models and hypotheses were summarized in Table 3.3.

The next chapter presents the results from analysis of the data collected. It sets out the descriptive results from the analysis of data beginning with the response rate and the results relating to the reliability and validity tests. This is followed by the findings on the statistical assumption tests including linearity, normality, multicollinearity and homoscedasticity tests. The descriptive statistics relating to Enterprise risk management, Macro environment, Top management demographics and organizational performance are then outlined. Finally, the findings relating to each of the study hypothesis are discussed and tabulated.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

The study's main objective was to establish the relationship between ERM, macro-environment and TMD and the performance of Kenyan state-owned corporations. To attain this broad objective, the study established four specific objectives and corresponding hypotheses. These were to determine the effect of ERM on performance of state owned corporations in Kenya, establish the influence of macro environment on the relationship between ERM and performance in Kenyan state owned corporations, establish the effect of top management demographics on the relationship between ERM and performance in Kenyan state owned corporations and determine the joint effect of ERM, top management demographics and macro environment on performance of state owned corporations in Kenya.

This chapter covers the results on the response rate, general information of the respondents, reliability and validity test, diagnostic tests, factor analysis and descriptive statistics on the study variables. Frequencies, percentages, mean, coefficient of variation and standard deviation were used to analyze the data. The findings are presented in charts and tables. The chapter ends with the findings relating to the specific objectives of this study. The hypothesis relating to the objective is then outlined before the findings are tabulated. A preliminary discussion relating to the inferential statistics is then given interpreting the tabulated statistics. The inferences made by the study in relation to the hypotheses are subsequently provided.

4.2 Response Rate

The study administered a total of 127 questionnaires and 92 questionnaires were properly filled and returned and thus representing a rate of response of 72.4%. According to Babbie (2004), a return rate of 50% and above is adequate to analyze and publish the results. Moreover, above 80% is regarded as excellent, above 70% as very good and above 60% as good. The response rate is further supported by Fowler (1984) who recommended that a response rate of 60% or above is regarded as acceptable and demonstrative of the study population. On the basis of this assertions, 72.4% response rate for this study was considered very good.

Table 4.1: Response Rate

Response	Frequency	Percent
Returned	92	72.4
Not returned	35	27.6
Total	127	100.0

Source: Primary Data (2019)

4.3 Test of Reliability

Reliability assesses the extent that a research instrument yields consistent outcomes after repeated administration in similar conditions. Reliability estimates the extent that a measurement tool yields accurate results that can be depended upon. This indicates that the measures are free from unstable or random error. Cronbach's alpha was used in the study, which is a measure of consistency as it tests the assumptions in order to avoid Type I and Type II errors (Patton, 2002).

The study adopted the Cronbach's alpha that ranges from 0 (no internal consistency) to 1 (complete internal consistency) to describe reliability factors extracted from formatted questionnaires on likert scale (rating from scale 1 to 5). The study used value

of 0.70 and above as a quick rule. Mkalama, (2014) in her study with similar measurements attained a high degree of reliability.

According to Cooper and Schindler (2011), it is important that the measurement instrument is reliable for it to measure consistently. Babbie (2004) posited that Cronbach alpha ≥ 0.7 shows that the research instrument has internal consistency and hence suggesting that it is reliable for use in the study. Table 4.2 shows that all the variables had acceptable reliability, that is, enterprise risk management ($\alpha = 0.974$), macro environment ($\alpha = 0.908$), organizational performance ($\alpha = 0.840$) and top management demographics ($\alpha = 0.778$). Hence the measurement instrument (questionnaire) was reliable.

Table 4.2: Test of Reliability

Variables	Items	Cronbach Alpha
Enterprise Risk Management	27	0.974
Macro-environment	26	0.908
Top Management Demographics	7	0.778
Organizational Performance	25	0.840

Source: Primary Data (2019)

4.4 Test of Validity

Validity is the capacity of a research instrument to accurately measure what it is intended to measure. When the research instrument adequately represents the content of the attribute or feature that the researcher is interested in, it is regarded as having validity. There are various forms of validity encompassing construct, content, face and criterion related validity (Cooper & Schindler, 2011).

The questionnaire was submitted to the supervisors to obtain their expert opinion on the suitability before pilot testing. The questionnaire was further presented to expert panelists from the school of business for evaluation and to obtain their opinion. The

questionnaire was then subjected to a pilot test of 14 respondents selected randomly and the data collected analyzed for validity. Based on the response, the questionnaire was reviewed before deploying the same for actual data collection.

4.5 Factor Analysis

Factor analysis is a dimension reduction analysis technique that seeks to reduce observable and measurable variables to fewer latent and unobservable variables that have a common variance (Bartholomew, Knott & Moustaki, 2011). The objective of factor analysis is to condense voluminous data into fewer and meaningful factors provided the statements are correlated (homogenous). It enables the researcher to parsimoniously denote a large number of related components into fewer and simpler factors. The study used principal components analysis (PCA). PCA empowers the researcher to extract fewer components to provide similar information that would be obtained from many components. To use PCA, the number of factors should be less than number of variables. The study used a factor loading of >0.5 (absolute value) to group variables into their respective factors. The Kaiser-Meyer-Olkin (KMO) and Bartlett's test P-value of <0.05 was used to test sampling adequacy which indicates whether the statement variables are homogenous and could be reduced into factors. The results are as follows;

4.5.1 Enterprise Risk Management

The study used Bartlett's test, KMO, total variance explained, scree plot and rotated variance matrix to reduce the statements explaining variable enterprise risk management into fewer and meaningful factors. The results are presented in Tables 4.3, 4.4 and 4.5.

Table 4.3: KMO and Bartlett's Test

KMO Measure of Sampling Adequacy		0.927
Bartlett's Test of Sphericity	Approx. Chi-Square	2436.997
	Df	351
	Sig.	0.000

Source: Primary Data (2019)

Study results in Table 4.3 show that KMO = 0.927 which is > 0.5 . Thus, there were sufficient items for each factor. P-value=0.000 $<.05$ hence various statements on enterprise risk management had high homogeneity. Further, these results imply that the statements on ERM had high correlation and hence provided a ground for factor analysis.

Table 4.4: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	16.213	60.047	60.047	16.213	60.047	60.047
2	2.809	10.405	70.451	2.809	10.405	70.451
3	1.057	3.916	74.367	1.057	3.916	74.367
4	0.898	3.327	77.694			
5	0.744	2.754	80.448			
6	0.639	2.367	82.815			
7	0.535	1.982	84.797			
8	0.484	1.793	86.591			
9	0.42	1.556	88.147			
10	0.373	1.382	89.529			
11	0.361	1.335	90.864			
12	0.345	1.276	92.14			
13	0.276	1.021	93.161			
14	0.263	0.974	94.134			
15	0.235	0.869	95.004			
16	0.191	0.706	95.709			
17	0.177	0.657	96.366			
18	0.154	0.569	96.935			
19	0.145	0.536	97.471			
20	0.139	0.513	97.984			
21	0.113	0.419	98.403			
22	0.097	0.358	98.761			

Table 4.4: Total Variance Explained (Cont')

23	0.091	0.338	99.099
24	0.086	0.32	99.418
25	0.064	0.239	99.657
26	0.051	0.189	99.846
27	0.042	0.154	100

Source: Primary Data (2019)

Eigen values refer to the variance accounted for by each factor. A factor is useful if its Eigen value > 1 . As shown in table 4.4, statements measuring enterprise risk management were reduced into three factors (Eigen value > 1). The three factors accounted for 74.367% of the variance in the 27 statements. Considering that $74.367\% > 70\%$ the three factors exhaustive explain the variance in the 27 statements.

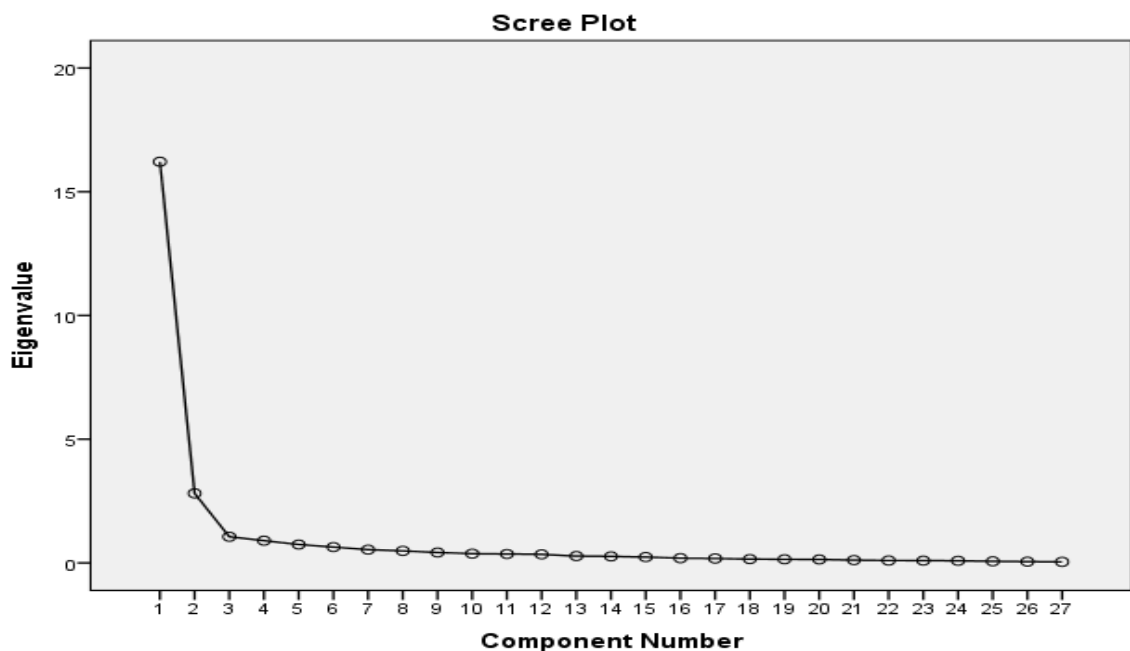


Figure 4.1: Scree Plot

Source: Data Analysis (2019)

Study results presented in Figure 4.1 indicate that when the first three components are derived, there is a decrease in differences between the Eigen values, where the curve trails off with values less than 1. This implies a three-factor component solution.

Table 4.5: Rotated Component Matrix

ERM Items	Component		
	1	2	3
Organization possess a formal strategy to pursue its mission and vision		0.864	
Organization has clearly written roles, structure and responsibilities for its functions		0.885	
Performance goals are set periodically to assess whether the organization is achieving its objectives		0.859	
All staff signs individual performance contracts in my organization		0.71	
Authority and responsibilities for the entire top management are formally defined		0.854	
The organization has an approved risk management policy	0.525		
The existing risk policy provides for the identification of strategic, operational and compliance risks			0.621
There exists a Board level committee with risk management accountability			0.702
The organization has a risk management function headed by a senior manager			0.763
The organization identifies strategic risks and their likelihood to affect the ability of achieving set organizational objectives		0.581	
The organization identifies operational risks and their likelihood to affect the ability of achieving set organizational objectives	0.56		
The organization identifies compliance risks and their likelihood to affect the ability of achieving set organizational objectives		0.548	
The organization identifies quality management system and their likelihood to affect the ability of achieving set organizational objectives		0.667	
The organization identifies corruption risks and their likelihood to affect the ability of achieving set organizational objectives		0.672	
The organization has an approved risk appetite statement	0.757		
The risk management function evaluates the on-going organizational risks	0.723		
The organization assesses impacts of risks on key performance indicators	0.686		
Formal reports are submitted to the Board periodically on the state of risks and risk mitigation			0.639
The organization has an automated system to track risk-related information	0.814		
Alternative risk response plan is established for all the significant risks identified by the organization	0.79		
The organization undertakes structured and frequent updates of information related to risk	0.636		
The organization holds formal risk management meetings to evaluate the status of enterprise risk management implementation	0.728		
All employees have been sensitized on the content of enterprise risk management policy	0.811		

Table 4.5: Rotated Component Matrix (Cont'd)

ERM Items	Component		
	1	2	3
All employees are aware of the organization's risk appetite levels			0.888
Risk management strategies are shared with all the lines of management			0.748
Employees in the organization are aware about identified risks and mitigation measures			0.786
Identified risks are shared with the relevant organizational stakeholders as appropriate			0.737

Source: Primary Data (2019)

The study used orthogonal rotation (Varimax method). In this rotation method the information explained by different factors is independent of each other. The importance of rotation is to enable different items to be described by different primary factors, and each factor to describe more than a single item. Using factor loading of a value > 0.5 , the three factors were as follows; the first factor which index Context setting, had strong loading on were; 'the organization has an approved risk management policy', 'the organization identifies operational risks and their likelihood to affect the ability of achieving set organizational objectives', 'the organization has an approved risk appetite statement', 'the risk management function evaluates the on-going organizational risks', 'the organization assesses impacts of risks on key performance indicators', 'the organization has an automated system to track risk-related information', 'alternative risk response plan is established for all the significant risks identified by the organization', 'the organization conducts structured and frequent updates of risk-related information', 'the organization holds formal risk management meetings to assess the status of enterprise risk management implementation', 'all employees have been sensitized on the content of enterprise risk management policy', 'all employees

are aware of the organization's risk appetite levels', 'risk management strategies are shared with all the lines of management', 'employees in the organization are aware about identified risks and mitigation measures' and 'identified risks are shared with the relevant organizational stakeholders as appropriate'.

The second factor which index Risk assessment, had strong loading on; 'organization possess a formal strategy to pursue its mission and vision', 'organization has clearly written roles', structure and responsibilities for its functions', 'performance goals are set periodically to evaluate whether the organization is accomplishing its objectives', 'all staff signs individual performance contracts in my organization', 'authority and responsibilities for the entire top management are formally defined', 'the organization identifies strategic risks and their likelihood to affect the ability of achieving set organizational objectives', 'the organization identifies compliance risks and their likelihood to affect the ability of achieving set organizational objectives', 'the organization identifies quality management system and their likelihood to affect the ability of achieving set organizational objectives' and 'the organization identifies corruption risks and their likelihood to affect the ability of achieving organizational objectives'.

The third factor which reflect Risk evaluation and communication, had strong loading on 'the existing risk policy provides for the identification of strategic, operational and compliance risks', 'there exists a board level committee with accountability for risk management', 'the organization has a risk management function led by a senior manager' and 'formal reports are submitted to the board periodically on the state of risks and risk mitigation'.

4.5.2 Macro-Environment

The study used KMO and Bartlett's test, scree plot, total variance explained and rotated variance matrix to reduce the statements explaining variable macro environment into fewer and meaningful factors. The results are presented in Tables 4.6, 4.7 and 4.8.

Table 4.6: KMO and Bartlett's Test

KMO Measure of Sampling Adequacy.		0.814
Bartlett's Test of Sphericity	Approx. Chi-Square	1174.131
	Df	325
	Sig.	0.000

The findings in Table 4.6 shows that KMO measure of sampling adequacy = $0.814 > 0.5$, thus there were sufficient items for each factor. $P\text{-value} = .000 < .05$ hence the statements on macro environment were homogenous. Moreover, these results imply that the statements on macro environment had high correlation and hence provided a ground for factor analysis.

As shown in Table 4.7, 27 statements measuring macro environment were reduced into six factors (Eigen value > 1). The six factors accounted for 65.92% of the variance in the 26 statements. $65.92\% < 70\%$ hence the six factors moderately explain the variance in the 26 statements.

Table 4.7: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.366	32.176	32.176	8.366	32.176	32.176
2	2.609	10.035	42.211	2.609	10.035	42.211
3	1.988	7.646	49.857	1.988	7.646	49.857
4	1.541	5.926	55.783	1.541	5.926	55.783
5	1.479	5.69	61.473	1.479	5.69	61.473
6	1.155	4.443	65.917	1.155	4.443	65.917
7	0.972	3.739	69.656			
8	0.966	3.717	73.373			
9	0.852	3.278	76.651			
10	0.735	2.826	79.476			
11	0.687	2.642	82.118			
12	0.577	2.217	84.335			
13	0.54	2.077	86.412			
14	0.497	1.911	88.324			
15	0.463	1.782	90.106			
16	0.404	1.553	91.659			
17	0.351	1.35	93.009			
18	0.326	1.255	94.264			
19	0.287	1.105	95.369			
20	0.251	0.965	96.334			
21	0.233	0.894	97.228			
22	0.179	0.689	97.918			
23	0.164	0.631	98.549			
24	0.158	0.607	99.156			
25	0.115	0.443	99.599			
26	0.104	0.401	100			

Source: Primary Data (2019)

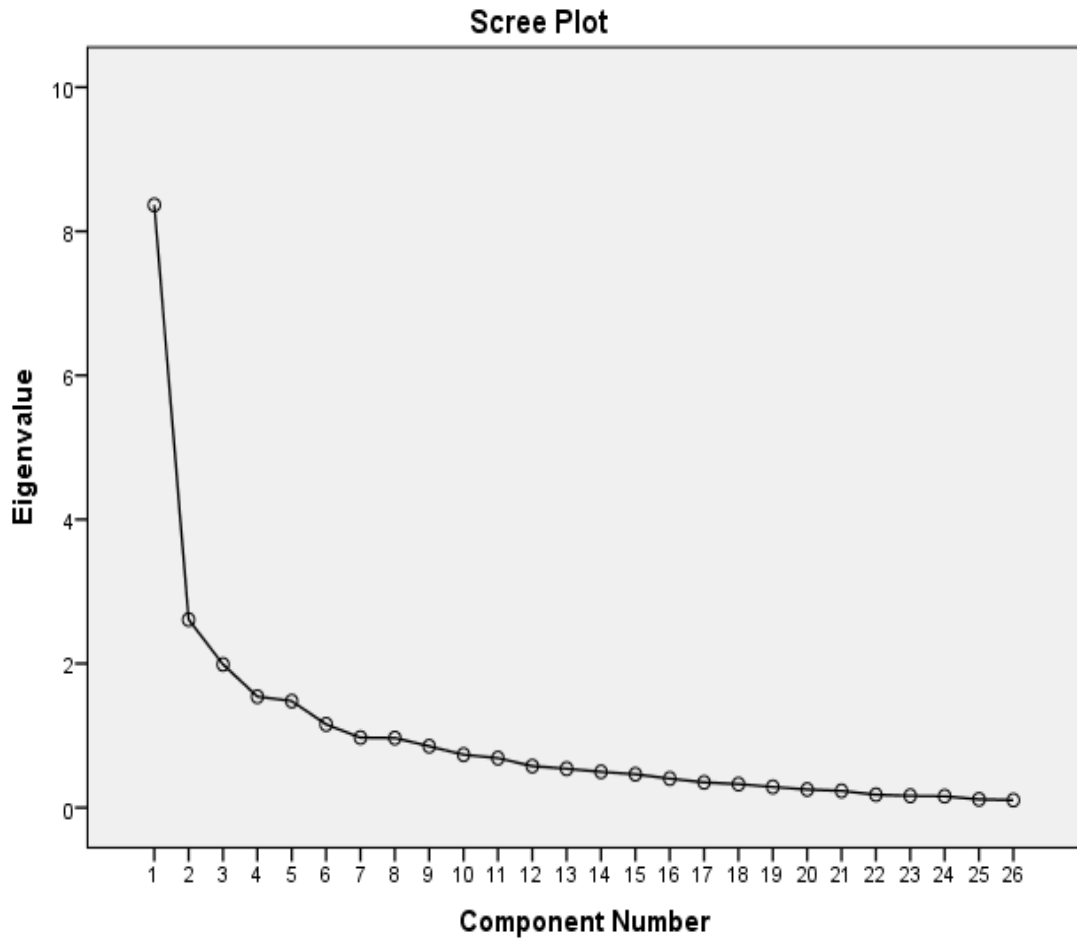


Figure 4.2: Scree plot

Source: Data Analysis (2019)

Figure 4.2 shows that after the first six components, the differences between the Eigen values decreases, the curve trails off with values less than 1. This supports a six factor component solution.

Table 4.8: Rotated Component Matrix

Statements	Component					
	1	2	3	4	5	6
Interest from various stakeholders	0.764					
Government pronouncements on policy changes from time to time	0.595					
Political stability of the country	0.769					
Change of political regime						0.561
Devolved government structure						0.495
The country's overall political stability	0.777					
Change in government's fiscal policies						0.491
Inflation trends in the country		0.505				
Level of the country's overall economic development		0.544				
Fluctuation in foreign exchange rates		0.761				
Changes in interest rates		0.866				
Changes in taxation regime and policies		0.783				
Level of annual budget allocations to the organization		0.528				
Demands of host communities influenced by norms				0.821		
Cultural practices e.g. land demarcation, farming practices and pastoralism				0.703		
Population growth rate					0.816	
Crime rates and acts of terrorism					0.586	
Ethic and tribal inclinations			0.517			
Gender issues			0.813			
Rapid developments in ICT e.g. internet usage & digitization of services						
Occurrence of natural disasters e.g. floods and drought				0.521		
Introduction of environmental sustainability legislation				0.599		
Civil society organizations agitation for rights			0.619			
Change in the Kenya constitution 2010 and subsequent legislation			0.798			
The legal framework prescribing organizational mandate			0.619			
Legislative activities touching on the organization's business	0.53					

Source: Primary Data (2019)

The first factor (political environment) had strong loading on; ‘interest from various stakeholders’, ‘Government pronouncements on policy changes from time to time’, ‘political stability of the country’, ‘the country's overall political stability’, ‘change of political regime’ and ‘devolved government structure’.

The second factor (economic environment) had strong loading on ‘inflation trends in the country’, ‘level of the country's overall economic development’, ‘fluctuation in foreign exchange rates’, ‘changes in interest rates’, ‘changes in taxation regime and policies’ and ‘level of annual budget allocations to the organization’. The third factor (social environment) had strong loading on ‘demands of host communities’, ‘cultural practices’, ‘population growth rate’, ‘crime rates’, ‘ethic and tribal inclinations’ and ‘gender issues’. The fourth factor (technological and ecological environment) had strong loading on ‘rapid development of ICTs’ and ‘occurrence of natural disasters’, the fifth factor (legal environment) had strong loading on ‘introduction of environmental sustainability legislation’, ‘civil society organizations agitation for rights’, ‘change in the Kenya constitution 2010 and ‘subsequent legislation’, ‘legal framework prescribing organizational mandate’ and ‘legislative activities touching on the organization’s business’.

4.5.3 Top Management Demographics

The study used KMO and Barlett’s test, total variance explained, scree plot and rotated variance matrix to reduce the statements explaining variable top management demographics into fewer and meaningful factors. The results are presented in tables 4.9, 4.10 and 4.11.

Table 4.9: KMO and Bartlett's Test

KMO measure of sampling adequacy		0.721
Bartlett's Test of Sphericity	Approx. Chi-Square	185.065
	Df	21
	Sig.	0.000

Source: Primary Data (2019)

The findings in Table 4.9 shows that KMO measure of sampling adequacy = 0.721 > 0.5, thus there were sufficient items for each factor. P-value = .000 < .05 hence the statements on top management demographics were homogenous. Further, these results imply that the statements on TMD had high correlation and hence provided a ground for factor analysis.

Table 4.10: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.119	44.56	44.56	3.119	44.56	44.56
2	1.118	15.975	60.535	1.118	15.975	60.535
3	0.878	12.541	73.076			
4	0.797	11.383	84.459			
5	0.472	6.743	91.203			
6	0.351	5.01	96.213			
7	0.265	3.787	100			

Extraction Method: Principal Component Analysis.

Source: Primary Data (2019)

As indicated in Table 4.10, seven statements measuring top management demographics were reduced into two factors (Eigen value >1). The two factors accounted for 60.54% of the variance in the 7 statements. 60.54 % < 70% thus the two factors moderately explain the variance in the 7 statements.

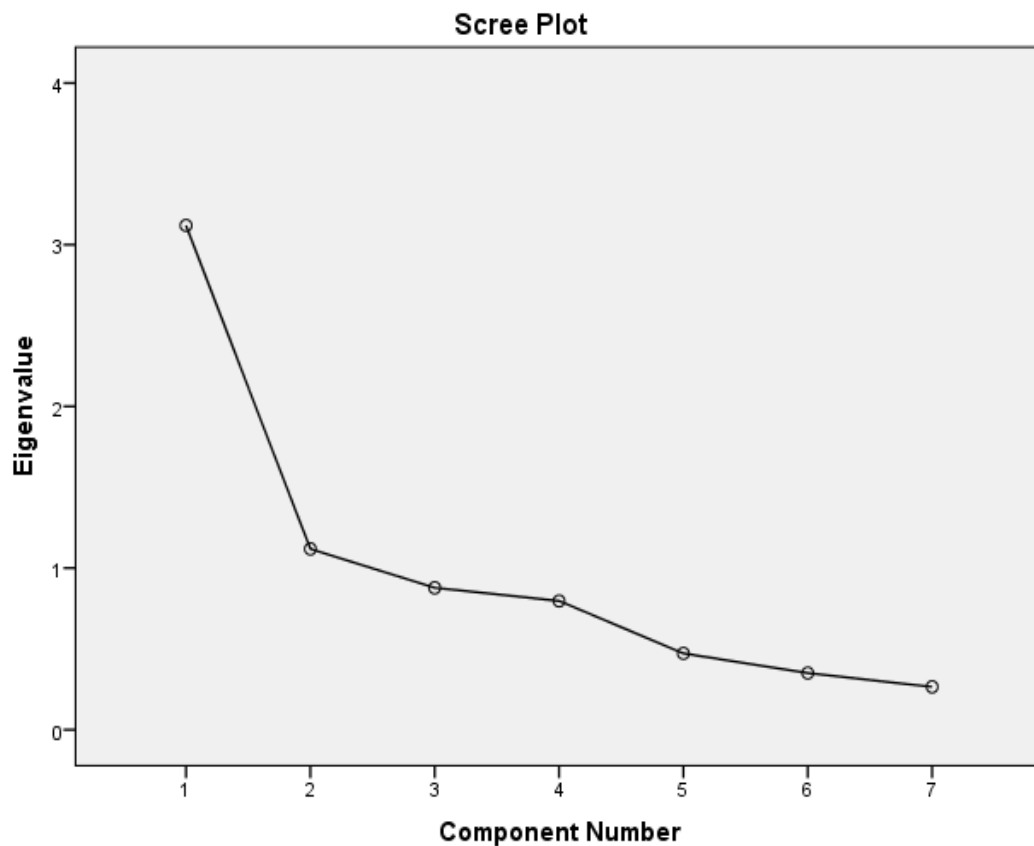


Figure 4.3: Scree Plot

Source: Data Analysis (2019)

Figure 4.3 shows that after the first two components, the differences between the Eigen values decreases, the curve trails off with values less than 1. This supports a two-factor component solution.

Table 4.11: Rotated Component Matrix

Top Managers Demographic Items	Component	
	1	2
Young top managers in the organization are more flexible and supportive of risk based thinking as compared to older top manager counterparts	0.738	
The organization values older top managers more than younger risk-based thinking counterparts		0.74
Top managers who possess postgraduate education integrate risk management in their functional operations more as compared to their counterparts without similar qualifications	0.672	
Top manager's orientation tends to influence their flexibility to exercise risk-based thinking	0.598	
Top managers with short tenure in the organization easily adopt integrated risk management practices as compared to their counterparts with long tenure	0.834	
Female top managers tend to easily adopt and integrate risk management practices and policies as compared to their male counterparts		0.568
Male top managers are more risk-based thinkers as compared to their female counterparts		0.755

Source: Primary Data (2019)

All the five studied demographic factors of age, gender, functional background, education and tenure had strong loading on ‘young top managers in the organization are more flexible and supportive of risk based thinking as compared to older top manager counterparts’, ‘the organization values older top managers more than younger risk-based thinking counterparts’, ‘top managers who possess postgraduate education integrate risk management in their functional operations more as compared to their

counterparts without similar qualifications’, ‘top manager's orientation tends to influence their flexibility to exercise risk-based thinking’ and ‘top managers with short tenure in the organization easily adopt integrated risk management practices as compared to their counterparts with long tenure’, ‘female top managers tend to easily adopt and integrate risk management practices and policies as compared to their male counterparts’ and ‘male top managers are more risk-based thinkers as compared to their female counterparts’.

4.5.5 Organizational Performance

The study used KMO and Barlett’s test, total variance explained, scree plot and rotated variance matrix to reduce the statements explaining variable organizational performance into fewer and meaningful factors. The results are presented in tables 4.12, 4.13 and 4.14.

Table 4.12: KMO and Bartlett's Test

KMO measure of sampling adequacy		0.827
Bartlett's Test of Sphericity	Approx. Chi-Square	1701.194
	Df	300
	Sig.	0.000

Source: Primary Data (2019)

The findings in table 4.12 show that KMO measure of sampling adequacy = 0.827 > 0.5, thus there were sufficient items for each factor. P-value = .000 < .05 hence the statements on organizational performance were homogenous. Further, these results imply that the statements on organization performance had high correlation and hence provided a ground for factor analysis.

Table 4.13: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.753	39.014	39.014	9.753	39.014	39.014
2	3.77	15.079	54.093	3.77	15.079	54.093
3	2.915	11.659	65.752	2.915	11.659	65.752
4	1.382	5.53	71.282	1.382	5.53	71.282
5	0.991	3.964	75.246			
6	0.902	3.608	78.854			
7	0.846	3.382	82.236			
8	0.811	3.242	85.479			
9	0.731	2.922	88.401			
10	0.623	2.492	90.894			
11	0.386	1.544	92.438			
12	0.301	1.205	93.642			
13	0.276	1.103	94.746			
14	0.256	1.024	95.77			
15	0.178	0.711	96.48			
16	0.172	0.69	97.17			
17	0.141	0.562	97.733			
18	0.119	0.476	98.208			
19	0.1	0.4	98.608			
20	0.079	0.317	98.925			
21	0.076	0.304	99.229			
22	0.067	0.266	99.495			
23	0.061	0.244	99.74			
24	0.035	0.138	99.878			
25	0.031	0.122	100			

Source: Primary Data (2019)

The results in table 4.13 indicated that 25 statements measuring organizational performance were reduced into four factors (Eigen value >1) accounting for 71.28% of the variance in the 25 statements. The four factors exhaustive explain the variance in the 25 statements since $71.28\% > 70\%$.

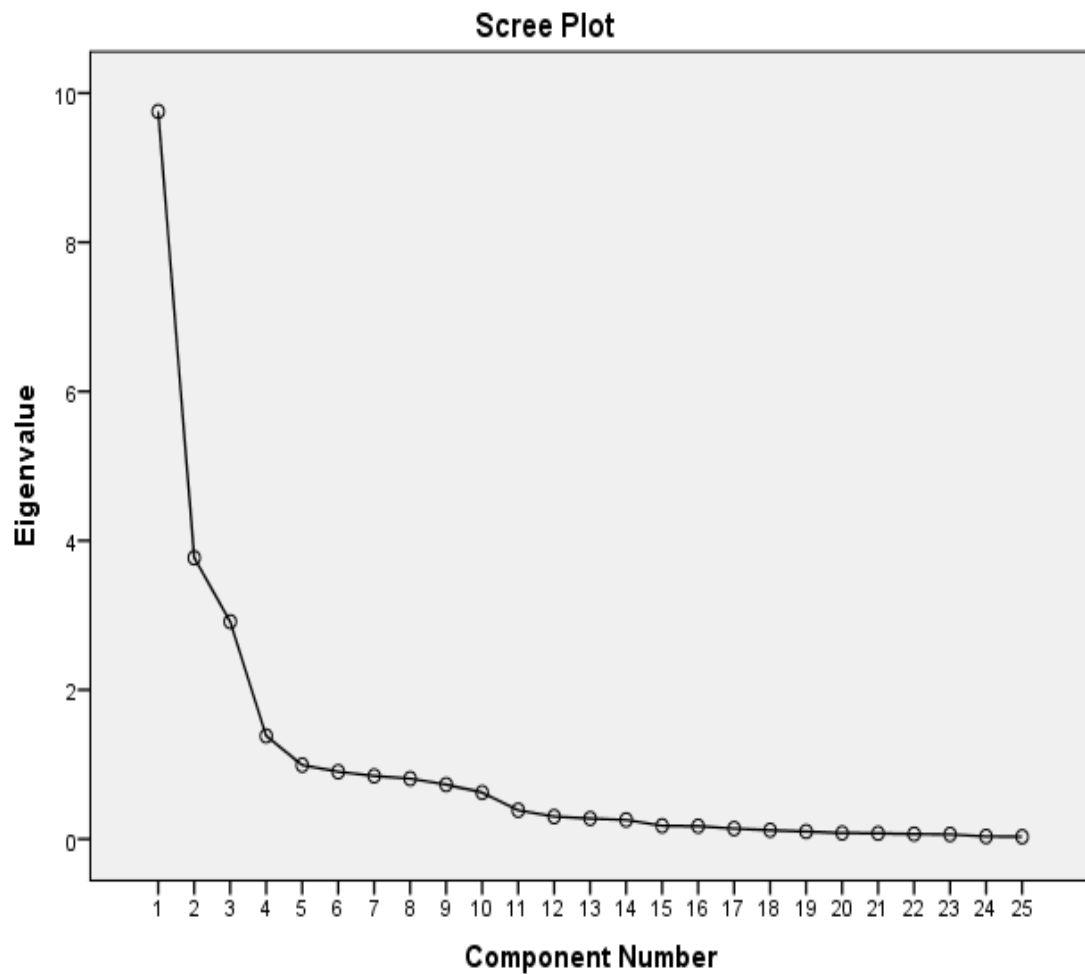


Figure 4.4 Scree Plot

Source: Data Analysis (2019)

The figure 4.4 shows that after the first four components, the differences between the Eigen values decreases, the curve trails off with values less than 1. This supports a four factor component solution.

Table 4.14: Rotated Component Matrix

Organizational Performance Items	Component			
	1	2	3	4
Revenue collection 2011/2012		0.74		
Revenue collection 2012/2013		0.845		
Revenue collection 2013/2014		0.886		
Revenue collection 2014/2015		0.943		
Revenue collection 2015/2016		0.952		
Budget absorption 2011/2012				0.65 4
Budget absorption 2012/2013				
Budget absorption 2013/2014				0.57 7
Budget absorption 2014/2015				0.67
Budget absorption 2015/2016				0.62 6
Overall corporate performance 2011/2012			0.874	
Overall corporate performance 2012/2013			0.844	
Overall corporate performance 2013/2014			0.824	
Overall corporate performance 2014/2015			0.901	
Overall corporate performance 2015/2016			0.829	
Corporate customer satisfaction 2011/2012	0.805			
Corporate customer satisfaction 2012/2013	0.862			
Corporate customer satisfaction 2013/2014	0.855			
Corporate customer satisfaction 2014/2015	0.879			
Corporate customer satisfaction 2015/2016	0.814			
Corporate service delivery 2011/2012				
Corporate service delivery 2012/2013	0.527			
Corporate service delivery 2013/2014	0.649			
Corporate service delivery 2014/2015	0.691			
Corporate service delivery 2015/2016	0.664			

Source: Primary Data (2019)

The first factor corporate customer satisfaction index/ corporate service delivery index had strong loading on; ‘corporate customer satisfaction 2011/2012’, ‘corporate customer satisfaction 2011/2012’, ‘corporate customer satisfaction 2012/2013’, ‘corporate customer satisfaction 2013/2014’, ‘corporate customer satisfaction 2014/2015’ ‘corporate customer satisfaction 2012/2013’, ‘corporate customer satisfaction 2013/2014’, ‘corporate customer satisfaction 2014/2015’, ‘corporate customer satisfaction 2015/2016’, ‘corporate service delivery 2011/2012’, ‘corporate service delivery 2012/2013’, ‘corporate service delivery 2013/2014’, ‘corporate service delivery 2014/2015’ and corporate service delivery 2015/2016’. The second factor (revenue collection) had strong loading on ‘revenue collection 2011/2012’, ‘revenue collection 2012/2013’, ‘revenue collection 2013/2014’, ‘revenue collection 2014/2015’ and ‘revenue collection 2015/2016’. The third factor (corporate performance) had strong loading on ‘overall corporate performance 2011/2012’, ‘overall corporate performance 2012/2013’, ‘overall corporate performance 2013/2014’, ‘overall corporate performance 2014/2015’ and ‘overall corporate performance 2015/2016’. The fourth factor (budget absorption) had strong loading on ‘budget absorption 2011/2012’, ‘budget absorption 2012/2013’, ‘budget absorption 2013/2014’, ‘budget absorption 2014/2015’ and ‘budget absorption 2015/2016’.

4.6 Diagnostic Tests

Diagnostic test also known as second order condition test are very essential in undertaking parametric tests such as regression analysis. Diagnostic tests seek to evaluate the suitability of the model in terms of the data satisfying the assumptions of linearity, normality, multicollinearity and homoscedasticity. This study tested the assumptions of linearity, normality, multicollinearity and homoscedasticity.

4.6.1 Linearity

The study tested for the assumption of linearity of data, that is, the independent and dependent variable were related in a linear fashion. Patton (2002) pointed out that the chance of non-linear relationships is high in the social sciences, thus it is essential to test for linearity.

Parametric test such as correlation and regression analysis require linear relationship. When data is not linearly related it may distort the result of any further analysis. To assess linearity of the distribution scores, One-way (ANOVA) F-test was used. The results were as presented in Table 4.15.

Table 4.15: Linearity

			Sum of Squares	df	Mean Square	F	Sig.
OP_Overall * ERM	Between Groups	(Combined)	2390.408	30	79.68	1.194	0.334
		Linearity Deviation from Linearity	432.455	1	432.455	6.483	0.018
	Within Groups	1957.953	29	67.516	1.012	0.494	
	Total	1534.28	23	66.708			
OP_Overall * TMD	Between Groups	(Combined)	1650.58	29	43.436	1.001	0.48
		Linearity Deviation from Linearity	463.578	1	363.578	6.466	0.033
	Within Groups	1,288.868	28	42.317	0.976	0.504	
	Total	1734.86	40	43.372			
OP_Overall * ME_combined	Between Groups	(Combined)	1714.213	32	53.569	1.247	0.321
		Linearity Deviation from Linearity	356.198	1	356.198	8.292	0.01
	Within Groups	1358.015	31	43.807	1.02	0.499	
	Total	730.287	17	42.958			
			2444.5	49			

Source: Primary Data (2019)

Results in Table 4.15 show that ERM was linearly related to organization performance (F=6.483, P-value=0.018<0.05), TMD was linearly related to organization performance (F=6.466, P-value=0.033<0.05) and macro environment was also linearly related to organization performance (F=8.292, P-value=0.01<0.05), thus the assumption of linearity was fulfilled.

4.6.2 Normality

Normality test was conducted to confirm that a normality assumption was not violated. Normality test confirms whether the data follows a normal distribution or asymmetrical distribution. The study used Kolmogorov-Smirnov and shapiro-wilk test where if p-value>0.05, the data is normal, if otherwise, the data has significant deviation from a normal distribution. Graphical method of P-P plots was used to test normality. The results of normality are shown in Table 4.16.

Table 4.16: Table results for Shapiro-Wilk Tests of Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
ERM	0.75	3	0.120
TMD	0.892	6	0.329
ME	0.998	3	0.923

Source: Primary Data (2019)

When non-significant results (p-value>0.05) are obtained for a score it shows that the data fits a normal distribution (Tabachnik & Fidell, 2007). The results in Table 4.16 show that the data in relation to each variable is normally distributed as the significance values in each case is greater than 0.05. This indicates that the data was suitable for further correlation and regression analysis. P-P plots were used to test for the normality of the distribution as shown in figures 4.5 (a), 4.5 (b), 4.5 (c) and 4.5 (d).

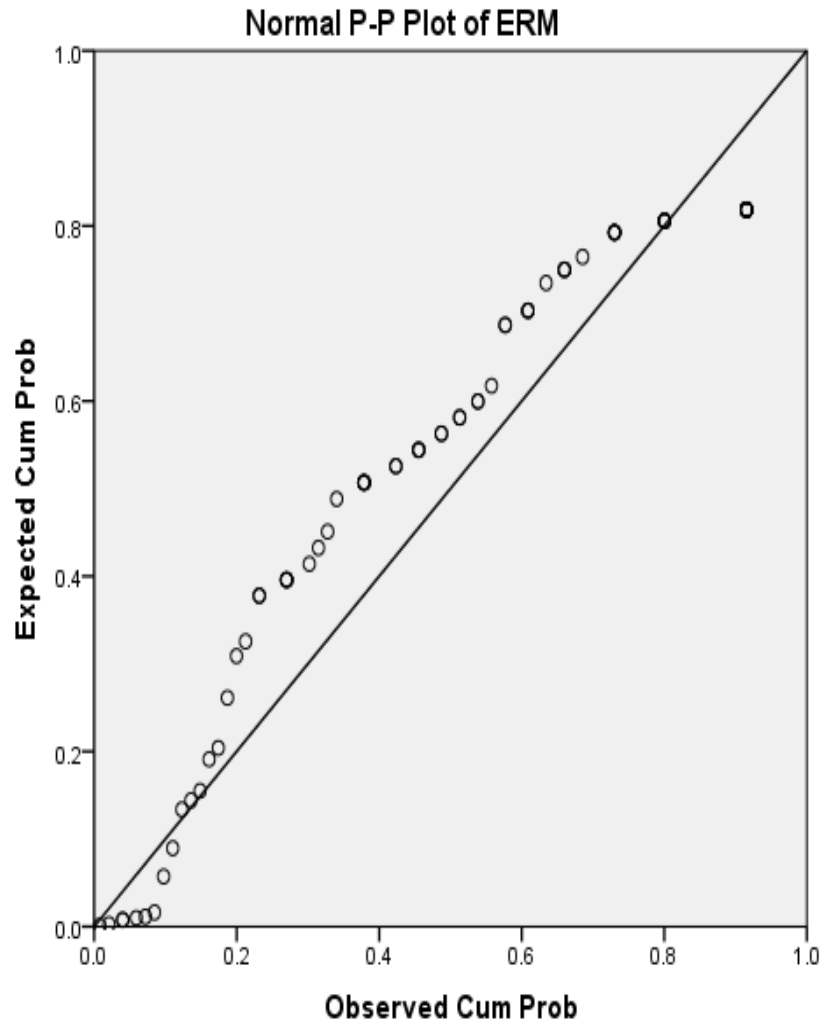


Figure 4.5(a): P-P Plot for ERM

Source: Data Analysis (2019)

The findings in figure 4.5 (a) shows that the observed values are cleaving towards the line of best fit with a few cases cleaving away from the line of best fit. This confirms a moderate good fit hence normally distributed for Enterprise risk management variable.

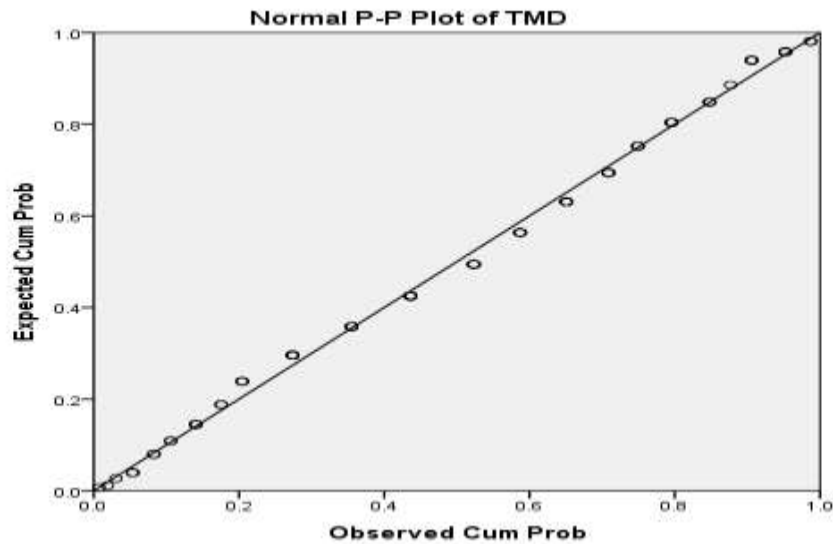


Figure 4.5(b): P-P Plot for Top Management Demographics

Source: Data Analysis (2019)

The findings in figure 4.5 (b) shows that all the observed values are cleaving towards the line of best fit. This confirms a moderate good fit hence normally distributed data for TMD variable.

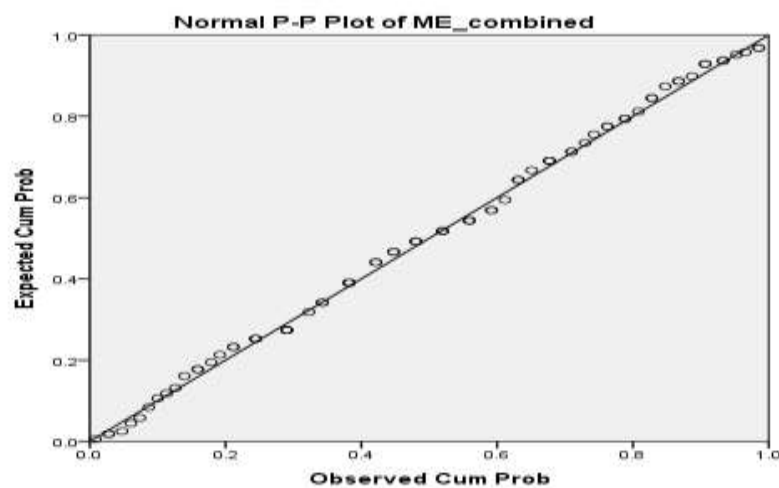


Figure 4.5(c): P-P Plot for Macro-environment

Source: Data Analysis (2019)

The study results in Figure 4.5(c) shows that the observed values are laying on the line of best fit with a few cases laying off the line of best fit. This confirms a moderate good fit hence normally distributed data for macro environment variable.

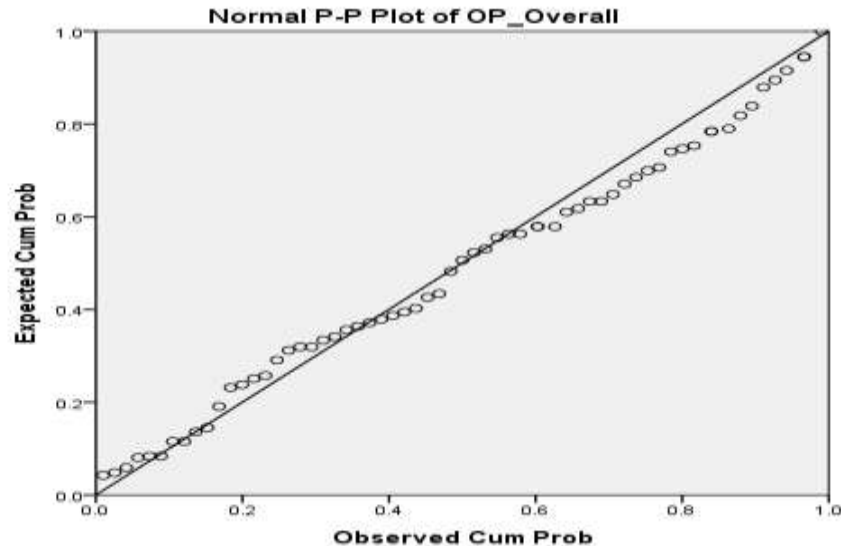


Figure 4.5(d): P-P Plot for Organizational Performance

Source: Data Analysis (2019)

The findings in figure 4.5 (d) shows that the observed values are cleaving towards the line of best fit with a few cases cleaving away from the line of best fit. This confirms a moderate good fit hence normally distributed data for organizational performance variable.

4.6.3 Multicollinearity

Multicollinearity evaluates whether there are any two independent variables with high correlation. Multicollinearity in a regression model leads to inflation and instability in the regression coefficients thus leading to unreliability of the coefficients and their significance levels. The study used coefficient of correlation, VIF, tolerance, conditional index and variance proportions to test multicollinearity. Coefficient of correlation > 0.5 indicates a probability of a problem with Multicollinearity, $VIF > 10$ indicates a probability of a problem with Multicollinearity. Tolerance value < 0.1 shows multicollinearity. Condition index > 30 shows multicollinearity and variance proportion > 1 shows multicollinearity.

Table 4.17: Correlation Matrix

		ERM	ME_combined	TMD	OP_Overall
ERM	Pearson Correlation	1			
	Sig. (2-tailed)				
ME_combined	Pearson Correlation	.440**	1		
	Sig. (2-tailed)	0			
TMD	Pearson Correlation	0.183	.386**	1	
	Sig. (2-tailed)	0.124	0.001		
OP_Overall	Pearson Correlation	.332*	.382**	0.158	1
	Sig. (2-tailed)	0.014	0.006	0.229	

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Source: Primary Data (2019)

Study results shown in Table 4.17 suggest that there was positive relationship amongst the study variables. However, all the correlation coefficients amongst respective independent variables were below 0.5, hence there was no presence of multicollinearity.

Table 4.18: Variance Inflation Factor

Relationship	VIF	Tolerance
ERM	1.000	1.000
Macro-environment	0.017	59.284
TMD	0.009	108.074

Source: Primary Data (2019)

As a measure of multicollinearity, if $VIF < 10$ and $\text{tolerance} > 0.1$, then there is no presence of multicollinearity. The results show that the independent variables are not highly correlated/ no presence of multicollinearity, that is, ERM ($VIF=1.000 < 10$, $\text{Tolerance} = 1 > 0.1$), macro environment ($VIF=0.017 < 10$, $\text{Tolerance} = 59.284 > 0.1$) and TMD ($VIF=0.009 < 10$, $\text{Tolerance} = 108.074 > 0.1$). It therefore means that ERM, TMD and macro environment could all be used in the analysis. Thus, the condition of multicollinearity is not violated.

4.6.4 Homoscedasticity

Homoscedasticity assumes that there is constant variance of the errors. Violations of homoscedasticity (heteroscedasticity) assumption leads to misleading standard errors thus making the significance of the coefficients to be unreliable. The study used Levene's test and residual scatter plot to test for homoscedasticity where if $p\text{-value} > 0.05$, there was homogeneity of variance in the data, if otherwise, the data has significant variance between the data sets. As a rule of thumb if the scatter plot indicates a constant band then the assumption of homoscedasticity is satisfied and if the plot indicates funnel in or fan out pattern then the assumption of homoscedasticity is violated hence the presence of heteroscedasticity. According to Tabachnick and Fidell (2007), low heteroscedasticity has little effect on significance tests but high heteroscedasticity weakens and distorts the analysis thus increasing possibility of committing type I error. The results are as shown in the residual scatter plots in Figure 4.6.

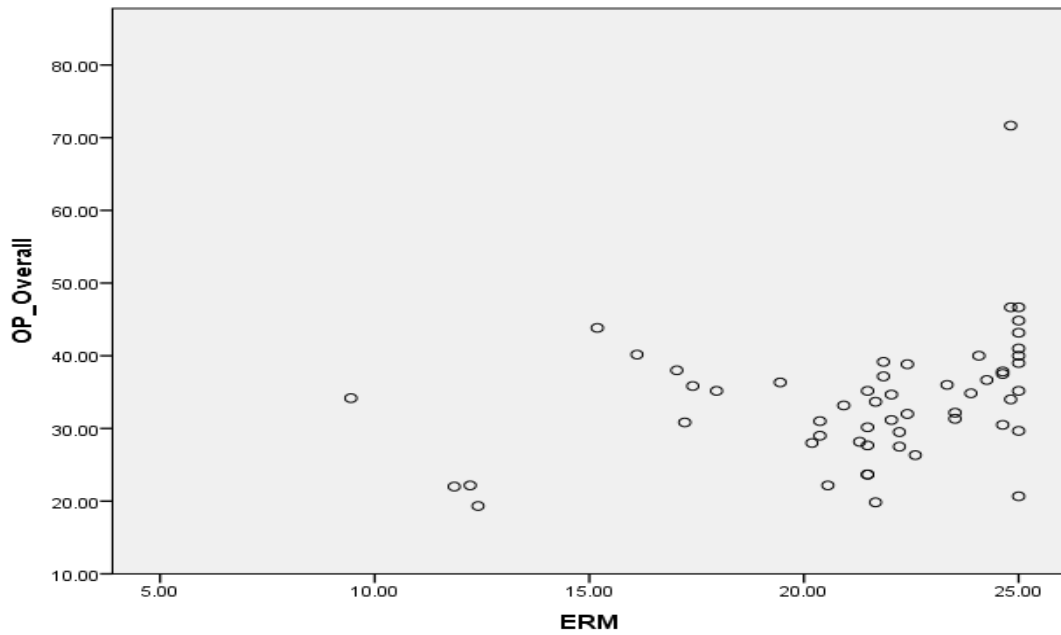


Figure 4.6: Residual Scatter Plot for ERM and Organizational Performance

Source: Data Analysis (2019)

Figure 4.6 shows that the residual scatter plot of ERM against organizational performance has a constant band pattern hence the relationships conform to the assumption of homoscedasticity, that is there exist a constant variance of errors.

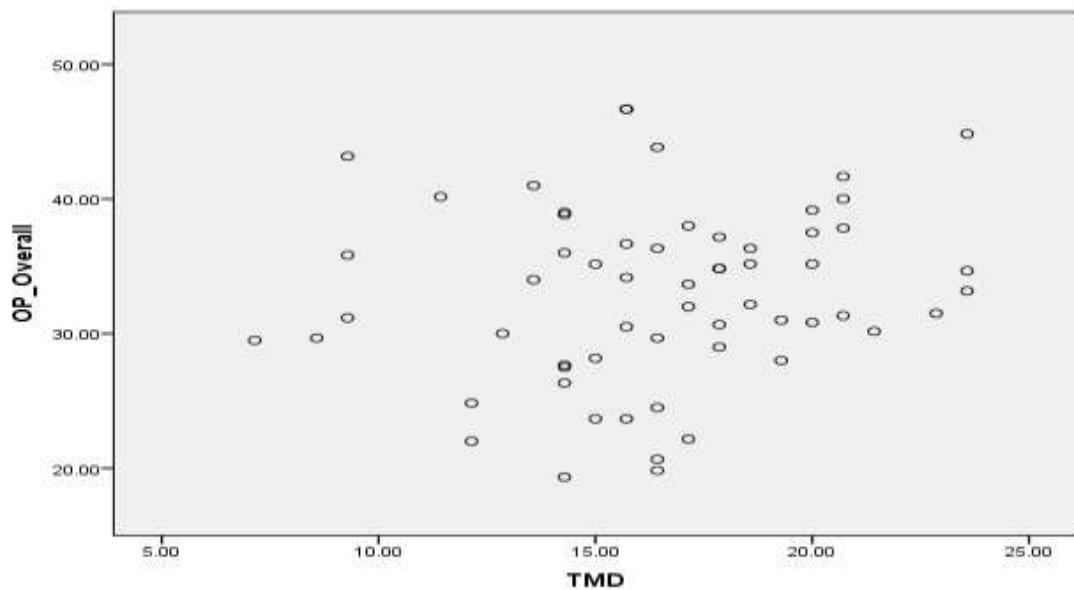


Figure 4.7: Residual Scatter Plot for TMD and Organizational Performance

Source: Data Analysis (2019)

As displayed in Figure 4.7, the residual scatter plot of TMD versus Organizational Performance has a constant band pattern hence the relationships conform to the assumption of homoscedasticity, that is there exist a constant variance of errors.

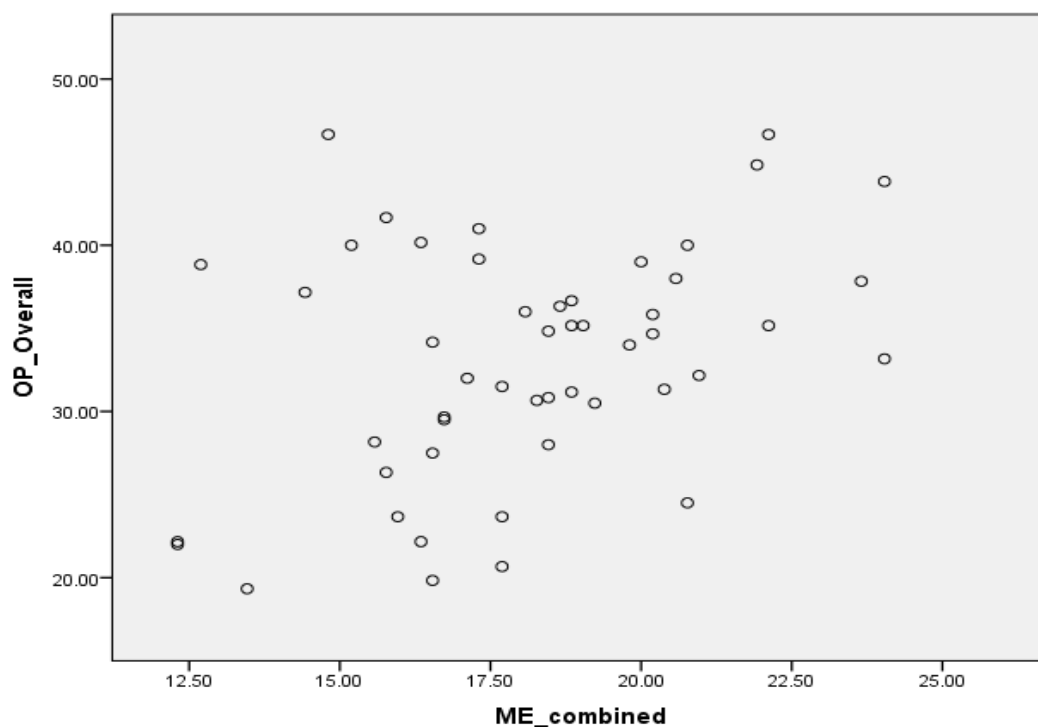


Figure 4.8: Residual Scatter Plot for macro environment and Organizational Performance

Source: Data Analysis (2019)

Figure 4.8 shows that the residual scatter plot of macro environment versus organizational performance has a constant band pattern hence the relationships conform to the assumption of homoscedasticity, that is there exist a constant variance of errors. In overall the assumptions of linearity, normality, multicollinearity, homoscedasticity were fulfilled, hence further regression and correlation analysis could be performed on the data to analyze the relationships between the study variables.

4.7 Demographic Characteristics of the Respondents

This section covers results on the demographic information about the respondents. Specifically, it focuses on; parent ministry, number of years of operation since establishment, number of full-time employees, organization's scope of operation, ownership structure of the organization and the profit-making organization category.

4.7.1 Parent Ministry

The study purposed to establish the parent ministry in which the respondents belonged.

The results were as shown in Table 4.19.

Table 4.19: Distribution of Selected SOEs by Parent Ministry

Parent Ministry	Frequency	Percentage
Agriculture	11	12.0
Education	25	27.2
Trade and Co-operatives	5	5.4
Constitutional commission	3	3.2
Energy	5	5.4
Industrialization	11	12.0
Water	3	3.3
Sports & Heritage	4	4.3
Transport, Infrastructure & Housing	5	5.4
Health	4	4.3
Tourism	5	5.4
Information & Communication technology	5	5.4
Finance	1	1.1
Roads	1	1.1
Public service, youth & gender	1	1.1
Environment	2	2.2
Internal security	1	1.1
Total	92	100

Source: Primary Data (2019)

As shown in table 4.19, respondents were drawn from various ministry. Majority of the respondents were drawn from Education ministry (26.9%) followed by agriculture and industrialization ministries (11.8%), trade & corporative, energy, transport infrastructure & housing, tourism, information & communication (5.4%), sports & heritage, health (4.3%), constitutional commission and water (3.2%), environment (2.2%) and finance, roads, Public service, youth & gender, Internal security (1.1%) respectively. Thus, all the ministries were represented in the study.

4.7.2 Number of Employees

Majority of the organizations at 37% had 1000 and above employees, followed by 25% of the organizations with 51-100 employees, 16.3% with 251-500 employees, 9.8% with 501-1000 employees, 8.7% with 101-500 employees and only 3.2% with below 51 employees. This confirms that most of the organizations are large organization with large workforce. The data is presented in Table 4.20.

Table 4.20: Distribution by Number of Employees

Number of Employees	Frequency	Percentage
Below 50	3	3.2
51-100	23	25
101-250	8	8.7
251-500	15	16.3
501-1000	9	9.8
1001 and above	34	37
Total	92	100

Source: Primary Data (2019)

4.7.3 Years of Operation

The study sought from the respondents the number of years their organizations had been in operation. The period varied from below 5 years to above 15 years. The results are presented in Table 4.21.

Table 4.21: Distribution by Years of Operation

Years of Operation	Frequency	Percentage
Below 5	3	3.3
6 – 10	25	27.2
11– 15	12	13.0
Above 15	52	56.5
Total	92	100.0

Source: Primary Data (2019)

It is noted from Table 4.21 that, majority of the organizations at 56.5% have been in operations for a period of over 15 years, followed by 27.2% with operation period of 6-10 years, 13% having operated for 10-15 years and the rest of 3.3% with less than 5 years respectively. Overall, the majority of the organizations have been in operation for more than 5 years.

4.7.4 Scope of Operation

The study investigated the organization scope of operation, whether national or regional. The results are presented in Table 4.22.

Table 4.22: Distribution by Scope of Operation

Scope of Operation	Frequency	Percentage
National	55	59.8
Regional	37	40.2
Total	92	100.0

Source: Primary Data (2019)

It is shown in Table 4.22 that, majority of the organizations were operating at national level. Notably significant 40.2% of the organizations also operated at the regional scope. This can be ascribed to the fact that most of the services rendered as indicated from the parent ministry cuts across national and regional levels.

4.7.5 Ownership Structure

The study enquired about the ownership structure of the organizations, indicating whether fully government owned or owned by both government and with a percentage of private shareholding. The results are provided in Table 4.23.

Table 4.23: Distribution by Ownership Structure

Ownership Structure	Frequency	Percentage
Fully government owned	86	93.5
Both government and privately owned	6	6.5
Total	92	100.0

Source: Primary Data (2019)

Table 4.23 shows that the most of the organizations at 93.5% were fully government owned and whereas only 6.5% were both government and privately owned. It was therefore inferred that most of the organizations are fully government owned.

4.7.6 Organization Interest Category

The study enquired from the respondents the organization interest category in which their respective organizations belonged to. The interest categories were commercial and non-commercial. Table 4.24 presents the results.

Table 4.24: Distribution by Interest Category

Company Interest Category	Frequency	Percentage
Commercial	48	52.2
Non commercial	44	47.8
Total	92	100.0

Source: Primary Data (2019)

It was noted as shown in Table 4.24 that, 52.2% of the organizations pursued commercial interests while 47.8% pursued non-commercial interests.

4.8 Descriptive Statistics

This section focused on the descriptive statistics results of the study variables. Mean standard deviation and coefficient of variation were used to examine and interpret the results.

4.8.1 Enterprise Risk Management

Enterprise risk management variable was analyzed on the subsections namely; context setting, risk assessment, risk evaluation and communication. The study sought the respondents rating on statements relating to enterprise risk management on a five point Likert scale ranging from 1 = Not at all; 2 = Small extent 3 = Moderate extent 4 = Great extent 5 = Very great extent. The results for ERM sub variables are presented in Table 4.25 – 4.28.

Table 4.25: Descriptive Statistics for ERM-Context Setting

Statements	Mean	Std. Deviation	CV (%)
Organization possess a formal strategy to pursue its mission and vision	4.7	0.808	17.191
Organization has clearly written roles, structure and responsibilities for its functions	4.76	0.603	12.668
Performance goals are set periodically to assess whether the organization is accomplishing its objectives	4.62	0.875	18.939
All staff signs individual performance contracts in my organization	4.38	0.892	20.365
Authority and responsibilities for the entire top management are formally defined	4.45	0.856	19.236
The organization has an approved risk management policy	4.39	0.96	21.868
The existing risk policy provides for the identification of strategic, operational and compliance risks	4.24	1.073	25.307
There exists a board level committee with risk management responsibility led by a senior manager	4.4	0.915	20.795
The organization has a risk management function headed by a senior manager	4.33	1.049	24.226
Overall	4.47	0.8923	19.962

Source: Primary Data (2019)

Table 4.25 shows that the subscale ‘contest setting’ to a large extent; ‘organization has clearly written roles’, ‘structure and responsibilities for its functions’ (mean =4.76 and standard deviation = 0.603), ‘organization possess a formal strategy to pursue its mission and vision’ (mean =4.70 and standard deviation = 0.808), ‘performance goals are set periodically to evaluate whether the organization is accomplishing its objectives’ (mean =4.62 and standard deviation = 0.603), and ‘authority and responsibilities for the

entire top management are formally defined’ (mean =4.45 and standard deviation = 0.856). The statement ‘The existing risk policy provides for the identification of strategic, operational and compliance risks’ had the highest CV of 25.307. This means that the statement had the highest variation in response. The statement ‘Organization has clearly written roles, structure and responsibilities for its functions’ had the lowest CV of 12.668. This means that the statement reported the lowest variation in response from the respondents. In the next, Table 4.26 results for risk assessment are shown.

Table 4.26: Descriptive Statistics for Risk Assessment

Statements	Mean	Std. Deviation	CV (%)
The organization identifies strategic risks and their likelihood to affect the ability of achieving set organizational objectives	4.32	0.983	22.755
The organization identifies operational risks and their likelihood to affect the ability of achieving set organizational objectives	4.27	1.039	24.333
The organization identifies compliance risks and their likelihood to affect the ability of achieving set organizational objectives	4.22	1.036	24.550
The organization identifies quality management system and their likelihood to affect the ability of achieving set organizational objectives	4.41	0.854	19.365
The organization identifies corruption risks and their likelihood to affect the ability of achieving set organizational objectives	4.46	0.818	18.341
The organization has an approved risk appetite statement	4.12	1.226	29.757
Overall	4.3	0.9927	23.086

Source: Primary Data (2019)

In the subscale risk assessment, the key statements were; ‘the organization identifies corruption risks and their likelihood to affect the ability of achieving set organizational objectives’ (mean =4.46 and standard deviation = 0.818), ‘the organization identifies quality management system and their likelihood to affect the ability of achieving set organizational objectives’ (mean =4.41 and standard deviation = 0.854), the organization identifies strategic risks and their likelihood to affect the ability of achieving set organizational objectives’ (mean =4.32 and standard deviation = 0.983) and ‘the organization identifies operational risks and their likelihood to affect the ability of achieving set organizational objectives’ (mean =4.27 and standard deviation = 1.03).

The statement ‘the organization has an approved risk appetite statement’ had the highest CV of 29.757. This means that the statement had the highest variation in response. The statement ‘The organization identifies corruption risks and their likelihood to affect the ability of achieving set organizational objectives’ had the lowest CV of 18.341. This means that the statement reported the lowest variation in response from the respondents. The following Table 4.27 shows the findings for risk evaluation in the surveyed Kenyan owned state corporations.

Table 4.27: Descriptive Statistics for Risk evaluation

Statements	Mean	Std. Deviation	CV (%)
The risk management function evaluates the on-going organizational risks	4.13	1.087	26.320
The organization assesses impacts of risks on key performance indicators	4.13	1.056	25.569
Formal reports are submitted to the Board periodically on the state of risks and risk mitigation	4.28	1.031	24.089
The organization has an automated system to track risk-related information	3.98	1.309	32.889
Alternative risk response plan is established for all the significant risks identified by the organization	4.07	1.107	27.199
The organization undertakes structured and frequent updates of information related to risk	4.08	1.118	27.402
Overall	4.11	1.118	27.202

Source: Primary Data (2019)

In the subscale risk evaluation, the key statements were; ‘formal reports are submitted to the board periodically on the state of risks and risk mitigation’ (mean =4.28 and standard deviation = 1.031), ‘the organization assesses impacts of risks on key performance indicators’ (mean =4.13 and standard deviation = 1.056), ‘the risk management function evaluates the on-going organizational risks’ (mean =4.13 and standard deviation = 1.087) and ‘the organization undertakes structured and frequent updates of information related to risk’ (mean =4.08 and standard deviation = 1.118).

The statement ‘The organization has an automated system to track risk-related information’ had the highest CV of 32.889. This means that the statement had the highest variation in response. The statement ‘Formal reports are submitted to the Board periodically on the state of risks and risk mitigation’ had the lowest CV of 24.089. This means that the statement reported the lowest variation in response from the respondents. The findings for communication about risks in the SOEs are presented next in Table 4.28.

Table 4.28: Descriptive Statistics for ERM Communication

Statements	Mean	Std. Deviation	CV (%)
The organization holds formal risk management meetings to assess the status of enterprise risk management implementation	4.04	1.118	27.673
All employees have been sensitized on the content of enterprise risk management policy	3.89	1.169	30.051
All employees are aware of the organization's risk appetite levels	3.82	1.226	32.094
Risk management strategies are shared with all the lines of management	4.08	1.088	26.667
Employees in the organization are aware about identified risks and mitigation measures	4.02	1.167	29.030
Identified risks are shared with the relevant organizational stakeholders as appropriate	4.16	1.207	29.014
Overall	4.00	1.1625	29.063

Source: Primary Data (2019)

In the subscale of risk based communication, the key statements were; ‘identified risks are shared with the relevant organizational stakeholders as appropriate’ (mean =4.16 and standard deviation = 1.207), ‘risk management strategies are shared with all the lines of management’ (mean =4.08 and standard deviation = 1.088) and ‘the

organization holds formal risk management meetings to assess the status of enterprise risk management implementation' (mean =4.04 and standard deviation = 1.118). The statement 'All employees are aware of the organization's risk appetite levels' had the highest CV of 32.094. This means that the statement had the highest variation in response.

The statement "Risk management strategies are shared with all the lines of management" had the lowest CV of 26.667. This means that the statement reported the lowest variation in response amongst the respondents. In general context setting had the highest rating (mean = 4.47, standard deviation =0.8923) followed by risk assessment (mean = 4.30, standard deviation =0.9927), risk evaluation (mean = 4.11, standard deviation =1.118) and communication (mean = 4.00, standard deviation =1.1625).

4.8.2 Macro Environment

Macro-environment is part of the wider external environment where an organization operates and consists of factors beyond the organizational control including those emanating from political, economic, social, technological, ecological and legal factors. The study sought the respondents rating on statements relating to Macro-environment on a five-point Likert scale (1 = Not at all; 2 = Small extent 3 = Moderate extent 4 = Great extent 5 = Very great extent). The results for political environment are presented first under Table 4.29.

Table 4.29: Descriptive Statistics for Political Environment

Statements	Mean	Std. Deviation	CV (%)
The country's overall political stability	4.47	0.813	18.19
Government pronouncements on policy changes from time to time	4.35	0.831	19.10
Political stability of the country	4.24	1.045	24.65
Interest from various stakeholders	4.16	0.998	23.99
Devolved government structure	3.68	1.094	29.73
Change of political regime	3.41	1.06	31.09
Overall	4.05	0.97	23.95

Source: Primary Data (2019)

In the subscale political environment, the key statements were; ‘the country's overall political stability’ (mean =4.47 and standard deviation = 0.813), ‘government pronouncements on policy changes from time to time’ (mean =4.35 and standard deviation = 0.831) and ‘political stability of the country’ (mean =4.24 and standard deviation = 1.045). The statement ‘Devolved government structure’ had the highest CV of 29.73. This means that the statement had the highest variation in response. The statement ‘The country's overall political stability’ had the lowest CV of 18.19. This means that the statement reported the lowest variation in response amongst the respondents.

Table 4.30: Descriptive Statistics for Economic Environment

Statements	Mean	Std. Deviation	CV (%)
Change in government's fiscal policies	4.37	1.075	24.60
Level of annual budget allocations to the organization	4.26	0.953	22.37
Level of the country's overall economic development	4.03	0.919	22.80
Changes in taxation regime and policies	3.7	1.09	29.46
Inflation trends in the country	3.62	1.137	31.41
Changes in interest rates	3.39	1.099	32.42
Fluctuation in foreign exchange rates	3.38	1.185	35.06
Overall	3.82	1.365	35.73

Source: Primary Data (2019)

In the subscale economic environment shown in Table 4.30, the key statements were; ‘change in government's fiscal policies’ (mean =4.37 and standard deviation = 1.075), ‘level of annual budget allocations to the organization’ (mean =4.26 and standard deviation = 0.953) and ‘level of the country's overall economic development’ (mean =4.03 and standard deviation = 0.919). The statement ‘Change in government's fiscal policies’ had the highest CV of 29.46. This means that the statement had the highest variation in response. The statement ‘Level of annual budget allocations to the organization’ had the lowest CV of 22.37. This means that the statement reported the least variation in response amongst the respondents.

Table 4.31: Descriptive Statistics for Social Environment

	Statements	Mean	Std. Deviation	CV (%)
Social Environment				
	Population growth rate	3.6	1.1	30.56
	Demands of host communities influenced by norms	3	1.158	38.60
	Gender issues	2.94	1.457	49.56
	Cultural practices e.g. land demarcation, farming practices and pastoralism	2.88	1.307	45.38
	Crime rates and acts of terrorism	2.85	1.109	38.91
	Ethic and tribal inclinations	2.7	1.247	46.19
	Overall	2.99	1.229	41.10

Source: Primary Data (2019)

In the subscale social environment, the key statements were; ‘population growth rate’ (mean =3.60 and standard deviation = 1.100), ‘demands of host communities influenced by norms’ (mean =3.00 and standard deviation = 1.158) and ‘gender issues’ (mean =2.94 and standard deviation = 1.457). The statement ‘Gender issues’ had the highest CV of 49.56. This means that the statement had the highest variation in response. The statement ‘Population growth rate’ had the lowest CV of 30.56. This means that the statement reported the least variation in response amongst the respondents. Table 4.32 presents the findings for technological and legal environments.

Table 4.32: Descriptive Statistics for Technological and Legal Environment

Statements	Mean	Std. Deviation	CV (%)
Technological & Ecological			
Rapid developments in ICT e.g. internet usage & digitization of services	4.19	1.01	24.11
Occurrence of natural disasters e.g. floods and drought	3.79	1.245	32.85
Overall	3.99	1.128	28.27
Legal Environment			
Legislative activities touching on the organization's business	4.24	0.918	21.65
The legal framework prescribing organizational mandate	4.08	1.051	25.76
Change in the Kenya constitution 2010 and subsequent legislation	3.62	1.203	33.23
Introduction of environmental sustainability legislation	3.51	1.143	32.56
Civil society organizations agitation for rights	2.8	1.17	41.79
Overall	3.65	1.097	30.05

Source: Primary Data (2019)

In the subscale technological and ecological, the key statements were; ‘rapid developments in ICT such as, internet usage & digitization of services’ (mean =4.19 and standard deviation = 1.01) and ‘occurrence of natural disasters such as, floods and drought’ (mean =3.79 and standard deviation = 1.245). The statement ‘Occurrence of natural disasters such as floods and drought’ had the highest CV of 32.85. This means that the statement had the most variation in response. The statement ‘Rapid developments in ICT such as internet usage & digitization of services’ had the lowest CV of 24.11. This means that the statement reported the least variation in response amongst the respondents.

In the subscale legal environment, the key statements were; ‘legislative activities touching on the organization's business’ (mean =4.24 and standard deviation = 0.918), ‘the legal framework prescribing organizational mandate’ (mean =4.08 and standard deviation = 1.051) and ‘change in the Kenya constitution 2010 and subsequent legislation’ (mean =3.62 and standard deviation = 1.203), ‘introduction of environmental sustainability legislation’ (mean =3.51 and standard deviation = 1.143) and ‘civil society organizations agitation for rights’ (mean = 2.8 and standard deviation = 1.17). The statement ‘civil society organizations agitation for rights’ had the highest CV of 41.79. This means that the statement had the most variation in response. The statement “Legislative activities touching on the organization's business” had the lowest CV of 21.65. This means that the statement reported the least variation in response amongst the respondents. In general political environment had the highest rating of macro environment (mean = 4.05 standard deviation = 0.813), followed by technological and ecological environment (mean = 3.99, standard deviation = 1.128), followed by economic environment (mean = 3.82, standard deviation = 1.365), legal environment (mean = 3.65, standard deviation =1.097) and social environment (mean = 2.99, standard deviation = 1.229) respectively.

4.8.3 Top Management Demographics

The study sought the respondents rating on statements relating to top management demographics on a five-point Likert scale (1 = Not at all; 2 = Small extent 3 = Moderate extent 4 = Great extent 5 = Very great extent). The results are presented in Table 4.33.

Table 4.33: Top management demographics

Statements	Mean	Std. Deviation	CV (%)
Young top managers in the organization are more flexible and supportive of risk based thinking as compared to older top manager counterparts	3.62	1.227	34
Top manager's orientation tends to influence their flexibility to exercise risk-based thinking	3.5	1.124	32
Male top managers are more risk-based thinkers as compared to their female counterparts	3.36	1.295	39
Top managers in short tenure in the organization easily adopt integrated risk management practices as compared to their counterparts with long tenure	3.3	1.243	38
Top managers who possess postgraduate education integrate risk management in their functional operations more as compared to their counterparts without similar qualifications	3.23	1.193	37
Female top managers tend to easily adopt and integrate risk management practices and policies compared to their male counterparts	3.12	1.314	42
The organization values older top managers more than younger risk-based thinking counterparts	2.7	1.418	53
Overall	3.26	1.259	

Source: Primary Data (2019)

The results in Table 4.33 showed that the key statements were; ‘young top managers in the organization are more flexible and supportive of risk based thinking as compared to older top manager counterparts’ (mean =3.62 and standard deviation = 1.227), ‘top

manager's orientation tends to influence their flexibility to exercise risk-based thinking' (mean = 3.50 and standard deviation = 1.124) and 'male top managers are more risk-based thinkers as compared to their female counterparts' (mean =3.36 and standard deviation = 1.295).

The statement "The organization values older top manager's more than younger risk-based thinking counterparts" had the highest CV of 53. This means that the statement had the most variation in response. The statement "Top manager's orientation tends to influence their flexibility to exercise risk-based thinking" had the lowest CV of 32. This means that the statement reported the least variation in response amongst the respondents.

4.8.4 Organizational Performance

The study investigated the performance of the Kenya owned state corporations and relied on the rating by respondents on both the non-financial and financial measures and the overall performance of the state corporations on a five point Likert scale (1 = Not at all; 2 = Small extent 3 = Moderate extent 4 = Great extent 5 = Very great extent). The results are as shown in Table 4.34.

Table 4.34: Organizational Financial Performance

Measures of Financial Performance	Mean	Std. Dev
Revenue collection	2.95	1.584

Revenue collection 2011/2012		
Revenue collection 2012/2013	2.96	1.274
Revenue collection 2013/2014	2.99	1.316
Revenue collection range in 2014/2015	3.12	1.269
Revenue collection range in 2015/2016	3.20	1.337
Overall Mean & Std Dev.	3.04	1.356
Budget absorption		
Budget absorption 2011/2012		
Budget absorption 2012/2013	3.81	1.349
Budget absorption 2013/2014	4.03	1.187
Budget absorption 2014/2015	4.01	1.245
Budget absorption 2015/2016	4.18	1.058
Overall Mean & Std Dev.	4.04	1.20

Source: Primary Data (2019)

As indicated in Table 4.34, revenue collection range during the financial period 2011, through 2016 were above average rating. Specifically, it was established that revenue collection range rating increases steadily from financial year 2011/2012 through financial year 2015/2016.

In terms of Budget absorption range against set target, the performance improved steadily from financial year 2011/2012 through to financial year 2015/2016. This implies that there had been successive prudence financial management strategies in place for the years.

Table 4.35: Organizational Non-Financial Performance

Measures of Non-Financial Performance	Mean	Std. Dev
---------------------------------------	------	----------

Overall corporate performance		
Overall corporate performance rating in 2011/2012	3.53	1.002
Overall corporate performance rating in 2012/2013	3.60	0.895
Overall corporate performance rating in 2013/2014	3.48	0.844
Overall corporate performance rating in 2014/2015	3.61	0.877
Overall corporate performance rating in 2015/2016	3.66	0.867
Overall Mean & Std Dev.	3.58	0.897
Corporate customer satisfaction		
Corporate customer satisfaction 2011/2012	2.70	0.916
Corporate customer satisfaction 2012/2013	2.88	0.864
Corporate customer satisfaction 2013/2014	2.94	0.889
Corporate customer satisfaction 2014/2015	3.02	0.859
Corporate customer satisfaction 2015/2016	3.12	0.865
Overall Mean & Std Dev.	2.93	0.878
Corporate service delivery		
Corporate service delivery 2011/2012	3.44	0.838
Corporate service delivery 2012/2013	2.96	0.860
Corporate service delivery 2013/2014	3.02	0.892
Corporate service delivery 2014/2015	3.10	0.887
Corporate service delivery 2015/2016	3.11	0.935
Overall Mean & Std Dev.	3.13	1.622

Source: Primary Data (2019)

Non-financial performance measures also indicated continuous improvement in the financial years 2011/2012 through 2015/2016 more so; overall corporate performance

rating improved from a mean of 3.53 in financial year 2011/2012 to a mean of 3.66 in financial year 2015/2016, Corporate customer satisfaction index improved from a mean of 2.70 in financial year 2011/2012 to a mean of 3.12 in financial year 2015/2016 and Corporate service delivery index improved from a mean rating of 3.44 in financial year 2011/2012 to a mean rating of 3.11 in financial year 2015/16.

4.9 Hypothesis Testing

The purpose of the study was to establish the influence of macro environment and top management demographics on the relationship between Enterprise risk management and performance in state corporations in Kenya. In order to accomplish this, the study set out the following four hypotheses; Enterprise risk management has a significant effect on performance in Kenyan State Owned Corporations, the relationship between Enterprise risk management and performance of Kenyan State Owned Corporations is significantly moderated by macro environment, the relationship between Enterprise risk management and performance in Kenyan State Owned Corporations is significantly moderated by top management demographics and that Enterprise risk management, Macro-environment and Top Management Demographics significantly positively influences organizational performance. The statistical significance of hypotheses 1 was tested using simple linear regression, hypotheses 2 and 3 were tested using hierarchical linear regression analysis, whereas hypotheses 4 was tested using multiple linear regression analysis. The results of these analyses are presented in this section.

The study adopted a 95% confidence level for testing of the hypotheses. The analyzed data was interpreted on the basis of the R, R^2 , F-ratio, t-values and the p-values. The values of R represented the correlation coefficient, which indicates the strength of the prediction. R^2 was the coefficient of determination, which indicated the ratio of variance in the dependent variable that was explained for by the independent variable.

The F-ratio was the overall goodness of fit of the regression model whereas, t-value showed the significance of the individual variables. The p-value provided the significance level for rejecting or failing to reject the null hypotheses. The study adopted 95% confidence level where $p=0.05$, therefore where the calculated p- values were greater than 0.05 ($p>0.05$), the conclusion was to fail of reject the null hypothesis, where p values were less than 0.05 ($p<0.05$), the conclusion was to reject the null hypothesis.

4.9.1 Enterprise Risk Management and Performance of Kenyan State-Owned Corporations

The first objective in this study was to establish the effect of ERM on the performance of state corporations in Kenya. Enterprise risk management was operationalized in terms of context setting, risk assessment, risk evaluation and communication. To test the influence of ERM on the performance of Kenyan State-Owned Corporations, the study set-out the first hypothesis, *H₀₁: ERM has no significant effect on performance of Kenyan State-Owned Corporations*. This hypothesis was tested using simple linear regression analysis. The results obtained are presented in tables 4.36, 4.37 and 4.38 for financial, non-financial performance indicators and overall performance, respectively.

Table 4.36: Influence of ERM on Financial Performance

Model Summary ^b						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.263 ^a	0.069	0.059	5.50893		

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	194.513	1	194.513	6.707	.013 ^b
1	Residual	2609.956	90	29.000		
	Total	2804.469	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.313	3.457		2.694	0.008
	ERM	0.403	0.159	0.263	2.532	0.013

a. Dependent Variable: OP_Financial

b. Predictors: (Constant), ERM

Source: Primary Data (2019)

The findings in Table 4.36 shows that ($R^2=.069$) 6.9% of the variation in financial performance of the organization was explained by the changes in ERM. The model was overall significant ($F=6.707$, $P\text{-Value}=0.013<0.05$). The influence of ERM on financial performance of the organization was significant ($\beta=0.403$, $t=2.532$, $P\text{-Value}=0.013<0.05$). This implies that one unit increase in ERM causes 0.403 units increase in organizational financial performance. The results provide evidence that ERM influences the financial performance of the organization.

Table 4.37: Influence of ERM on Non-Financial Performance

Model Summary ^b						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.222 ^a	0.049	0.039	3.33498		

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	51.468	1	51.468	4.680	.034 ^b
1	Residual	989.867	90	10.999		
	Total	1041.335	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.37	2.092		5.436	0.000
	ERM	0.207	0.096	0.222	2.151	0.034

a. Dependent Variable: OP_Non_Financial

b. Predictors: (Constant), ERM

Source: Primary Data (2019)

The results in Table 4.37 indicated that ($R^2=0.049$) 4.9 percent of the variation in non-financial performance of the organizations were accounted for by the changes in ERM. The model was overall significant ($F= 4.680$, $P\text{-Value}=0.034<0.05$). The influence of ERM on non-financial performance of the organization was significant ($\beta=0.207$, $t=2.151$, $P\text{-Value}=0.034<0.05$). This implies that one unit increase in ERM causes 0.207 units increase in organizational non-financial performance. The results provide evidence that ERM significantly influences organizational non-financial performance.

Table 4.38: Influence of ERM on Organizational Performance

Model Summary^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.256 ^a	0.065	0.054	6.79854	

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	274.757	1	274.757	6.294	.017 ^b
1	Residual	3928.713	90	43.652		
	Total	4203.469	91			

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.287	4.267		5.458	0.000
	ERM	0.479	0.196	0.256	2.438	0.017

a. Dependent Variable: OP_Overall

b. Predictors: (Constant), ERM

Source: Primary Data (2019)

As shown in Table 4.38, the coefficient of determination ($R^2=.065$) indicated that 6.5 percent of the variation in organizational performance were explained by the changes in ERM. The model was overall significant ($F= 6.294$, $P\text{-Value}=0.017<0.05$). The influence of ERM on organizational performance was significant ($\beta=0.479$, $t=2.438$, $P\text{-Value}=0.017<0.05$). This implies that one unit increase in ERM causes 0.479 units increase in organizational performance. The results provide evidence that ERM influences organizational performance, hence hypothesis that ERM has a significant effect on organizational performance in Kenyan State Owned Corporations was supported.

4.9.2 Influence of Macro Environment on the Relationship between Enterprise Risk Management and Performance of Kenyan State-Owned Corporations

The second objective in this study was to assess the effect of Macro environment on the relationship between Enterprise risk Management and performance in Kenyan State-Owned Corporations. Macro environment was operationalized in terms of Political, Economic, Social, Technological, Ecological and Legal factors. To test the effect of Macro environment on this relationship, the study set out a second hypothesis, *H₀₂: Macro environment has no significant moderating influence on the relationship between ERM and performance of Kenyan State-Owned Corporations.*

This hypothesis was tested using stepwise regression analysis proposed by Baron and Kenny (1986). It involved three steps. The first step tested the influence of ERM on organizational performance. The second step tested the effect of macro environment on ERM. The third step, an interaction term was introduced and tested for its significance. Moderation takes effect if the interaction term in the third step is significant. The findings are presented in tables 4.39, 4.40, 4.41, 4.42, 4.43 and 4.44 respectively.

Table 4.39: Moderating Influence of Macro-environment on the Relationship between ERM and Organizational Performance

Model Summary ^d								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	Sig. F Change	
1	.256 ^a	0.065	0.054	6.79854	0.065	6.224	0.017	
2	.290 ^b	0.084	0.063	6.61389	0.019	1.812	0.182	
3	.330 ^c	0.109	0.078	6.56131	0.025	2.416	0.124	
ANOVA ^a								
Model		Sum of Squares	df	Mean Square	F	Sig.		
1	Regression	274.757	1	274.757	6.294	.017 ^b		
	Residual	3928.713	90	43.652				
	Total	4203.469	91					
2	Regression	354.035	2	177.018	4.093	.021 ^c		
	Residual	3849.434	89	43.252				
	Total	4203.469	91					
3	Regression	458.052	3	152.684	3.587	.018 ^d		
	Residual	3745.418	88	42.562				
	Total	4203.469	91					
Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta				
1	(Constant)	23.287	4.267		5.458	0.000		
	ERM	0.479	0.196	0.256	2.438	0.017		
2	(Constant)	18.744	5.347		3.505	0.001		
	ERM	0.363	0.209	0.194	1.733	0.087		
	ME_combined	0.379	0.282	0.151	1.346	0.182		
3	(Constant)	5.385	10.1		0.533	0.595		
	ERM	1.081	0.507	0.578	2.134	0.036		
	ME_combined	1.203	0.599	0.478	2.008	0.048		
	ERM_ME_Intercept	-0.044	0.028	-0.618	-1.554	0.124		

a. Dependent Variable: OP_Overall

b. Predictors: (Constant), ERM

c. Predictors: (Constant), ERM, ME_combined

d. Predictors: (Constant), ERM, ME_combined, ERM_ME_Intercept

Source: Primary Data (2019)

In the first step, ERM accounts for 6.5 percent variation in organizational performance ($R^2 = 0.065$). The model was overall significant ($F = 6.294$, $P\text{-Value} = 0.017 < 0.05$). The beta coefficient was statistically significant ($\beta = 0.479$, $t = 2.438$, $P\text{-Value} = 0.017 < 0.05$). The results in step one were significant.

In step two, when macro environment was introduced, ERM and macro environment accounted for 8.4 percent of the variation in organizational performance. The overall model was statistically significant ($F = 4.093$, $P\text{-Value} = 0.021$). Beta coefficient for ERM was not significant ($\beta = 0.363$, $t = 1.733$, $P\text{-Value} = 0.087 > 0.05$). Additionally, the beta for macro environment was not significant ($\beta = 0.379$, $t = 1.346$, $P\text{-Value} = 0.182 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 2.5 percent from 0.084 in step two to 0.109 in step three. The R^2 change of indicated that the interaction of ERM and macro environment insignificantly influenced organization performance. The overall model in step three indicate that the interaction was statistically significant ($F = 3.587$, $P\text{-Value} = 0.018 < 0.05$). Beta coefficient for interaction term was not significant ($\beta = -0.044$, $t = -1.554$, $P\text{-Value} = 0.124 > 0.05$).

The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the hypothesis that the relationship between ERM and performance in Kenyan State-Owned Corporations is significantly moderated by macro environment.

Table 4.40: Moderating Influence of Political Environment on the Relationship between ERM and Organizational Performance

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.256 ^a	0.065	0.054	6.79854	0.065	6.224	0.017
2	.286 ^b	0.082	0.061	6.62242	0.017	1.581	0.212
3	.287 ^c	0.082	0.051	6.65914	0.000	0.032	0.858

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	274.757	1	274.757	6.294	.017 ^b
	Residual	3928.713	90	43.652		
	Total	4203.469	91			
2	Regression	344.099	2	172.049	3.968	.023 ^c
	Residual	3859.370	89	43.364		
	Total	4203.469	91			
3	Regression	345.53	3	115.177	2.627	.057 ^d
	Residual	3857.939	88	43.840		
	Total	4203.469	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.287	4.267		5.458	0.000
	ERM	0.479	0.196	0.256	2.438	0.017
2	(Constant)	20.01	4.903		4.081	0.000
	ERM	0.341	0.22	0.182	1.546	0.126
	MeP	0.304	0.241	0.148	1.257	0.212
3	(Constant)	18.808	8.312		2.263	0.026
	ERM	0.426	0.524	0.228	0.813	0.418
	MeP	0.365	0.418	0.178	0.873	0.385
	ERM_MeP_Intercept	-0.004	0.024	-0.068	-0.18	0.858

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, MeP

c. Predictors: (Constant), ERM, MeP, ERM_MeP_Intercept

d. Dependent Variable: OP_Overall

Source: Primary Data (2019)

The results in table 4.40 show that in step one, ERM accounts for 6.5 percent variation in organizational performance ($R^2 = 0.065$). The model was overall significant ($F = 6.294$, $P\text{-Value} = 0.017 < 0.05$). The beta coefficients were statistically significant ($\beta = 0.479$, $t = 2.438$, $P\text{-Value} = 0.017 < 0.05$). The results in step one were significant.

In step two when macro environment (political environment) was introduced, ERM and macro environment (political environment) accounted for 8.2 percent of the variation in organizational performance. The overall model was statistically significant ($F = 3.968$, $P\text{-Value} = 0.023 < 0.05$). Beta coefficient for ERM was not significant ($\beta = 0.341$, $t = 1.546$, $P\text{-Value} = 0.126 > 0.05$). Additionally, the beta for macro environment (political environment) was not significant ($\beta = 0.304$, $t = 1.257$, $P\text{-Value} = 0.212 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 did not improve from step two (0.082) to step three (0.082). The failure of change in R^2 indicated that the interaction of ERM and macro environment (political environment) did not significantly influence organization performance. The overall model in step three indicated that the interaction was not statistically significant ($F = 2.627$, $P\text{-Value} = 0.057 > 0.05$). Beta coefficient for interaction term was not significant ($\beta = -0.004$, $t = -0.18$, $P\text{-Value} = 0.858 > 0.05$). The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the hypothesis that the relationship between ERM and performance in Kenyan State-Owned Corporations is significantly moderated by macro environment (political environment).

Table 4.41: Moderating Influence of Economic Environment on the Relationship between ERM and Organizational Performance

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.256 ^a	0.065	0.054	6.79854	0.065	6.224	0.017
2	.361 ^b	0.130	0.11	6.40999	0.065	6.617	0.012
3	.370 ^c	0.137	0.107	6.42206	0.007	0.666	0.417
ANOVA ^a							
Model		Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	274.757	1	274.757	6.294	.017 ^b	
	Residual	3928.713	90	43.652			
	Total	4203.469	91				
2	Regression	546.634	2	273.317	6.652	.002 ^c	
	Residual	3656.835	89	41.088			
	Total	4203.469	91				
3	Regression	574.099	3	191.366	4.64	.005 ^d	
	Residual	3629.37	88	41.243			
	Total	4203.469	91				
Coefficients ^a							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
		B	Std. Error	Beta			
1	(Constant)	23.287	4.267		5.458	0.000	
	ERM	0.479	0.196	0.256	2.438	0.017	
2	(Constant)	18.119	4.494		4.032	0.000	
	ERM	0.359	0.191	0.192	1.879	0.064	
	MeE	0.403	0.157	0.262	2.572	0.012	
3	(Constant)	21.415	6.048		3.541	0.001	
	ERM	0.127	0.342	0.068	0.372	0.711	
	MeE	0.24	0.254	0.156	0.945	0.347	
	ERM_MeE_Intercept	0.012	0.014	0.199	0.816	0.417	

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, MeE

c. Predictors: (Constant), ERM, MeE, ERM_MeE_Intercept

d. Dependent Variable: OP_Overall

Source: Primary Data (2019)

The results in Table 4.41 shows that in step one, ERM accounts for 6.5 percent variation in organizational performance ($R^2 = 0.065$). The model was overall significant ($F = 6.294$, $P\text{-Value} = 0.017 < 0.05$) the beta coefficient was statistically significant ($\beta = 0.479$, $t = 2.438$, $P\text{-Value} = 0.017 < 0.05$). The results in step one were significant.

In step two when macro environment (economic environment) was introduced, ERM and macro environment (economic environment) accounted for 13 percent of the variation in organizational performance. The overall model was statistically significant ($F = 6.652$, $P\text{-Value} = 0.002 < 0.05$). Beta coefficient for ERM was not significant ($\beta = 0.359$, $t = 1.879$, $P\text{-Value} = 0.064 > 0.05$), however the beta coefficient for macro environment (economic environment) was significant ($\beta = 0.403$, $t = 2.572$, $P\text{-Value} = 0.012 < 0.05$). The results in step two were significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved from step two (0.13) to step three (0.137). The R^2 change of 0.07 indicated that the interaction of ERM and macro environment (economic environment) insignificantly influenced organization performance. The overall model in step three indicate that the interaction was statistically significant ($F = 4.64$, $P\text{-Value} = 0.005 < 0.05$). Beta coefficient for interaction term was not significant ($\beta = 0.012$, $t = 0.816$, $P\text{-Value} = 0.417 > 0.05$). The results in step three were not significant thus moderation did not take effect. The results did not provide enough evidence to support the hypothesis that the relationship between ERM and performance in Kenyan State-Owned Corporations is significantly moderated by macro environment (economic environment).

Table 4.42: Moderating Influence of Social Environment on the Relationship between ERM and Organizational Performance

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.256 ^a	0.065	0.054	6.79854	0.065	6.224	0.017
2	.266 ^b	0.071	0.050	6.62443	0.006	0.527	0.47
3	.274 ^c	0.075	0.044	6.64614	0.004	0.42	0.519

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	274.757	1	274.757	6.294	.017 ^b
	Residual	3928.713	90	43.652		
	Total	4203.469	91			
2	Regression	297.871	2	148.935	3.394	.038 ^c
	Residual	3905.599	89	43.883		
	Total	4203.469	91			
3	Regression	316.406	3	105.469	2.388	.074 ^d
	Residual	3887.063	88	44.171		
	Total	4203.469	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.287	4.267		5.458	0.000
	ERM	0.479	0.196	0.256	2.438	0.017
2	(Constant)	21.673	4.712		4.6	0.000
	ERM	0.459	0.193	0.245	2.377	0.02
	MeS	0.135	0.186	0.075	0.726	0.47
3	(Constant)	17.163	8.415		2.04	0.044
	ERM	0.694	0.411	0.371	1.688	0.095
	MeS	0.45	0.522	0.25	0.863	0.39
	ERM_MeS_Intercept	-0.016	0.025	-0.239	-0.648	0.519

a. Predictors: (Constant), ERM
b. Predictors: (Constant), ERM, MeS
c. Predictors: (Constant), ERM, MeS, ERM_MeS_Intercept
d. Dependent Variable: OP_Overall

Source: Primary Data (2019)

In step one, ERM accounts for 6.5 percent variation in organizational performance ($R^2=0.065$). The model was overall significant ($F= 6.294$, $P\text{-Value}= 0.017<0.05$) the beta coefficient was statistically significant ($\beta= 0.479$, $t=2.438$, $P\text{-Value}= 0.017<0.05$). The results in step one were significant.

In step two when macro environment (social environment) was introduced, ERM and macro environment (social environment) accounted for 7.1 percent of the variation in organizational performance. The overall model was statistically significant ($F= 3.394$, $P\text{-Value}= 0.038<0.05$). Beta coefficient for ERM was significant ($\beta= 0.459$, $t=2.377$, $P\text{-Value}=0.02<0.05$) but the beta coefficient for macro environment (social environment) was not significant ($\beta= 0.135$, $t=0.726$, $P\text{-Value}= 0.47>0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved from step two (0.071) to step three (0.075). The R^2 change of 0.04 indicated that the interaction of ERM and macro environment (social environment) insignificantly influenced organization performance. The overall model in step three indicate that the interaction was not statistically significant ($F= 2.388$, $P\text{-Value}= 0.074>0.05$). Beta coefficient for interaction term was not significant ($\beta=-0.016$, $t=-0.648$, $P\text{-Value}=0.519>0.05$). The results in step three were not significant thus moderation did not take effect. The results did not provide enough evidence to support the hypothesis that the relationship between ERM and performance in Kenyan State-Owned Corporations is significantly moderated by macro environment (social environment).

Table 4.43: Moderating Influence of Technological Environment on the Relationship between ERM and Organizational Performance

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.256 ^a	0.065	0.054	6.79854	0.065	6.224	0.017
2	.340 ^b	0.116	0.096	6.46246	0.051	5.071	0.027
3	.350 ^c	0.122	0.092	6.47509	0.006	0.653	0.421

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	274.757	1	274.757	6.294	.017 ^b
	Residual	3928.713	90	43.652		
	Total	4203.469	91			
2	Regression	486.531	2	243.266	5.825	.004 ^c
	Residual	3716.938	89	41.763		
	Total	4203.469	91			
3	Regression	513.912	3	171.304	4.086	.009 ^d
	Residual	3689.557	88	41.927		
	Total	4203.469	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.287	4.267		5.458	0.000
	ERM	0.479	0.196	0.256	2.438	0.017
2	(Constant)	19.668	4.36		4.511	0.000
	ERM	0.301	0.203	0.16	1.482	0.142
	MeT	0.373	0.166	0.244	2.252	0.027
3	(Constant)	23.59	6.53		3.613	0.001
	ERM	0.042	0.379	0.022	0.111	0.912
	MeT	0.179	0.293	0.117	0.61	0.543
	ERM_MeT_Intercept	0.013	0.016	0.236	0.808	0.421

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, MeT

c. Predictors: (Constant), ERM, MeT, ERM_MeT_Intercept

d. Dependent Variable: OP_Overall

Source: Primary Data (2019)

In step one, ERM accounts for 6.5 percent variation in organizational performance ($R^2=0.065$). The model was overall significant ($F= 6.294$, $P\text{-Value}= 0.017<0.05$) the beta coefficient was statistically significant ($\beta=0.479$, $t=2.438$, $P\text{-Value}= 0.014<0.05$). The results in step one were significant.

In step two when macro environment (technological environment) was introduced, ERM and macro environment (technological environment) accounted for 11.6 percent of the variation in organizational performance. The overall model was statistically significant ($F= 5.825$, $P\text{-Value}= 0.004<0.05$). Beta coefficient for ERM was not significant ($\beta= 0.301$, $t=1.482$, $P\text{-Value}=0.142>0.05$) but the beta coefficient for macro environment (technological environment) was significant ($\beta= 0.373$, $t=2.252$, $P\text{-Value}= 0.027<0.05$). The results in step two were significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved from step two (0.116) to step three (0.122). The R^2 change of 0.06 indicated that the interaction of ERM and macro environment (technological environment) insignificantly influenced organization performance. The overall model in step three indicates that the interaction was statistically significant ($F= 4.086$, $P\text{-Value}= 0.009<0.05$). Beta coefficient for interaction term was however not significant ($\beta=0.013$, $t=0.808$, $P\text{-Value}=0.421>0.05$). The results in step three were not significant thus moderation did not take effect. The results did not provide enough evidence to support the hypothesis that the relationship between ERM and performance in Kenyan State-Owned Corporations is significantly moderated by macro environment (technological environment).

Table 4.44: Moderating Influence of Legal Environment on the Relationship between ERM and Organizational Performance

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.256 ^a	0.065	0.054	6.79854	0.065	6.224	0.017
2	.354 ^b	0.125	0.105	6.42816	0.060	6.077	0.016
3	.354 ^c	0.125	0.095	6.46388	0.000	0.019	0.89

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	274.757	1	274.757	6.294	.017 ^b
	Residual	3928.713	90	43.652		
	Total	4203.469	91			
2	Regression	525.875	2	262.937	6.363	.003 ^c
	Residual	3677.594	89	41.321		
	Total	4203.469	91			
3	Regression	526.68	3	175.56	4.202	.008 ^d
	Residual	3676.789	88	41.782		
	Total	4203.469	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.287	4.267		5.458	0.000
	ERM	0.479	0.196	0.256	2.438	0.017
2	(Constant)	18.956	4.397		4.311	0.000
	ERM	0.31	0.198	0.166	1.568	0.12
	MeL	0.435	0.176	0.26	2.465	0.016
3	(Constant)	19.744	7.199		2.743	0.007
	ERM	0.262	0.399	0.14	0.657	0.513
	MeL	0.391	0.364	0.234	1.072	0.286
	ERM_MeL_Intercept	0.003	0.019	0.045	0.139	0.89

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, MeL

c. Predictors: (Constant), ERM, MeL, ERM_MeL_Intercept

d. Dependent Variable: OP_Overall

Source: Primary Data (2019)

In step one, ERM accounts for 6.5 percent variation in organizational performance ($R^2=0.065$). The model was overall significant ($F= 6.294$, $P\text{-Value}= 0.017<0.05$) the beta coefficients was statistically significant ($\beta= 0.479$, $t=2.438$, $P\text{-Value}= 0.017<0.05$). The results in step one were significant.

In step two when macro environment (legal environment) was introduced, ERM and macro environment (legal environment) accounted for 12.5 percent of the variation in organizational performance. The overall model was statistically significant ($F= 6.363$, $P\text{-Value}= 0.003<0.05$). Beta coefficient for ERM was not significant ($\beta=0.31$, $t=1.568$, $P\text{-Value}=0.12>0.05$) however the beta for macro environment (legal environment) was significant ($\beta= 0.435$, $t=2.465$, $P\text{-Value}= 0.016<0.05$). The results in step two were significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 did not improved from step two (0.125) to step three (0.125). The no change in R^2 indicated that the interaction of ERM and macro environment (legal environment) does not influenced organization performance. The overall model in step three indicates that the interaction was statistically significant ($F=4.202$, $P\text{-Value}= 0.008<0.05$). Beta coefficient for interaction term was not significant ($\beta=0.003$, $t=0.139$, $P\text{-Value}=0.89>0.05$). The results in step three were not significant thus moderation did not take effect. The results did not provide enough evidence to support the hypothesis that the relationship between ERM and performance in Kenyan State-Owned Corporations is significantly moderated by macro environment (legal environment).

In summary the six individual models representing the indicators of macro environment (PESTEL) results confirms to the overall results of the macro environment. The results showed that there was no enough evidence to support the hypothesis that the

relationship between ERM and performance in Kenyan State Owned Corporations is significantly moderated by macro environment hence the hypothesis two was rejected (not supported).

4.9.3 The Effect of Top Management Demographics on the Relationship between Enterprise Risk Management and Performance of Kenyan SOEs

The third objective in this study was to evaluate the effect of Top management demographics on the relationship between ERM and performance in Kenyan State-Owned Corporations. Hambrick and Mason (1984) advanced that Top management demographics affect performance through their effect on the organization's strategies. This study tested this relationship using the Top management demographics, which included age, education, functional background, financial positions, tenure and gender ((Nielson & Nielson, 2013 and Marimuthu & Kolandaisamy, 2009).

To capture this objective, the third hypothesis was set, *H₀₃: Top Management Demographics has no significant influence on the relationship between ERM and performance in Kenyan State-Owned*. This hypothesis was tested using stepwise regression analysis proposed by Baron Kenny (1986). It involved three steps. The first step in the model requires that the dependent variable be regressed against the independent variable. The influence of ERM on organizational performance was tested. The second step tested the effect of Top management demographics on ERM. The third step, an interaction term was introduced and tested for its significance. Moderation takes effect if the interaction term in the third step is significant. The findings are presented in Table 4.45, 4.46, 4.47, 4.48, 4.49, 4.50, 4.51, 4.52, 4.53, 4.54, 4.55, 4.56, 4.57, 4.58, 4.59 and 4.60.

Table 4.45: Moderating Influence of Top Management Demographics on the Relationship between ERM and Organizational Performance

Model Summary ^d								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	Sig. F Change	
1	.256 ^a	0.065	0.054	6.79854	0.065	6.224	0.017	
2	.261 ^b	0.068	0.047	6.63361	0.003	0.279	0.599	
3	.321 ^c	0.103	0.072	6.54557	0.035	3.410	0.048	

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	274.757	1	274.757	6.294	.017 ^b
	Residual	3928.713	90	43.652		
	Total	4203.469	91			
2	Regression	287.039	2	143.52	3.261	.043 ^c
	Residual	3916.43	89	44.005		
	Total	4203.469	91			
3	Regression	433.158	3	144.386	3.37	.022 ^d
	Residual	3770.311	88	42.844		
	Total	4203.469	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.287	4.267		5.458	0.000
	ERM	0.479	0.196	0.256	2.438	0.017
2	(Constant)	22.085	4.741		4.658	0.000
	ERM	0.463	0.194	0.247	2.385	0.019
	TMD	0.094	0.178	0.055	0.528	0.599
3	(Constant)	14.152	6.351		2.228	0.028
	ERM	0.907	0.307	0.484	2.95	0.004
	TMD	0.686	0.365	0.4	1.877	0.064
	ERM_TMD_Intercept	-0.032	0.017	-0.486	-1.847	0.048

a. Dependent Variable: OP_Overall

b. Predictors: (Constant), ERM

c. Predictors: (Constant), ERM, TMD

d. Predictors: (Constant), ERM, TMD, ERM_TMD_Intercept

Source: Primary Data (2019)

The findings in Table 4.45 indicated that in the first step, ERM accounts for 6.5 percent variation in organizational performance ($R^2 = 0.065$). The model was overall significant

($F= 6.294$, $P\text{-Value}= 0.017 < 0.05$) the beta coefficients was statistically significant ($\beta= 0.479$, $t=2.438$, $P\text{-Value}= 0.017 < 0.05$). The results in step one were significant.

In step two, when top management demographics was introduced, ERM and top management demographics accounted for 6.8 percent of the variation in organizational performance. The overall model was statistically significant ($F= 3.261$, $P\text{-Value}= 0.043 < 0.05$). Beta coefficient for ERM was significant ($\beta= 0.463$, $t=2.385$, $P\text{-Value}=0.019 < 0.05$), however the beta for top management demographics was not significant ($\beta= 0.094$, $t=0.528$, $P\text{-Value}= 0.599 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 3.5 percent from 0.068 in step two to 0.103 in step three. Beta coefficient for interaction term was significant ($\beta= -0.032$, $t=-1.847$, $P\text{-Value}=0.048 < 0.05$). The results in step three were therefore significant hence moderation took effect. The results provided enough evidence to support the moderation of top management on the relationship between ERM and performance in Kenyan State-Owned Corporations.

Table 4.46: Moderating Influence of age on the Relationship between ERM and non-financial Performance

Model Summary ^d							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	
1	.222 ^a	0.049	0.039	3.33498	0.049	4.680	
2	.251 ^b	0.063	0.038	3.88256	0.014	0.053	
3	.270 ^c	0.073	0.033	3.89442	0.010	0.653	
ANOVA ^a							
Model		Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	51.468	1	51.468	4.680	.034 ^b	
	Residual	989.867	90	10.999			
	Total	1041.335	91				
2	Regression	65.758	2	32.879	2.999	.122 ^c	
	Residual	975.577	89	10.962			
	Total	1041.335	91				
3	Regression	75.667	3	25.222	2.298	.185 ^d	
	Residual	965.668	88	10.974			
	Total	1041.335	91				
Coefficients ^a							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
		B	Std. Error	Beta			
1	(Constant)	11.37	2.092		5.436	0.000	
	ERM	0.207	0.096	0.222	2.151	0.034	
2	(Constant)	9.868	3.608		2.735	0.008	
	ERM	0.275	0.132	0.271	2.079	0.042	
	topman_age	0.025	0.109	0.03	0.231	0.818	
3	(Constant)	-0.681	13.544		-0.05	0.96	
	ERM	0.737	0.587	0.727	1.256	0.214	
	topman_age	0.717	0.863	0.857	0.831	0.41	
	interactage_erm	-0.031	0.038	-0.865	-0.808	0.422	

a. Dependent Variable: OP_Non_Financial

b. Predictors: (Constant), ERM, topman_age

c. Predictors: (Constant), ERM, topman_age, interactage_erm

d. Dependent Variable: OP_Non_Financial

Source: Primary Data (2019)

The findings in Table 4.46 indicated that in the first step, ERM accounts for 4.9 percent variation in non-financial performance ($R^2 = 0.049$). The model was overall significant ($F = 4.680$, $P\text{-Value} = 0.034 < 0.05$) the Beta coefficient was statistically significant ($\beta = 0.207$, $t = 2.151$, $P\text{-Value} = 0.034 < 0.05$). The results in step one were significant.

In step two when age was introduced, ERM and age accounted for 6.3 percent of the variation in non-financial performance. The overall model was not statistically significant ($F = 2.999$, $P\text{-Value} = 0.122 > 0.05$). Beta coefficient for ERM was significant ($\beta = 0.275$, $t = 2.079$, $P\text{-Value} = 0.042 < 0.05$). Beta coefficient for age was not significant ($\beta = 0.025$, $t = 0.231$, $P\text{-Value} = 0.818 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 1.0 percent from 0.063 in step two to 0.073 in step three. Beta coefficient for interaction term was not significant ($\beta = -0.031$, $t = -.808$, $P\text{-Value} = 0.422 > 0.05$). The results in step three were not significant, hence moderation did not take effect. The results did not provide enough evidence to support the moderation of Top management (age) on the relationship between ERM and non-financial performance in Kenyan State-Owned Corporations.

Table 4.47: Moderating Influence of age on the Relationship between ERM and financial Performance

Model Summary ^d							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.263 ^a	0.069	0.059	5.50893	0.069	6.707	0.013
2	.314 ^b	0.098	0.075	6.28718	0.029	0.219	0.641
3	.400 ^c	0.160	0.129	6.10234	0.062	4.628	0.036

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	194.513	1	194.513	6.707	.013 ^b
	Residual	2609.956	90	29.000		
	Total	2804.469	91			
2	Regression	275.72	2	137.865	4.852	.037 ^c
	Residual	2528.749	89	28.413		
	Total	2804.469	91			
3	Regression	448.086	3	149.362	5.578	.012 ^d
	Residual	2356.383	88	26.777		
	Total	2804.469	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.313	3.457		2.694	0.008
	ERM	0.403	0.159	0.263	2.532	0.013
2	(Constant)	4.727	5.607		0.843	0.403
	ERM	0.563	0.214	0.325	2.631	0.011
	topman_age	0.081	0.173	0.058	0.468	0.641
3	(Constant)	-43.99	23.29		-1.889	0.064
	ERM	2.702	1.016	1.561	2.66	0.01
	topman_age	3.379	1.542	2.413	2.191	0.032
	interactage_erm	-0.146	0.068	-2.572	-2.151	0.036

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_age

c. Predictors: (Constant), ERM, topman_age, interactage_erm

d. Dependent Variable: OP_Financial

Source: Primary Data (2019)

The findings in Table 4.47 indicated that in the first step, ERM accounts for 6.9 percent variation in financial performance ($R^2 = 0.069$). The overall model was significant ($F = 6.707$, $P\text{-Value} = 0.013 < 0.05$) the beta coefficient was statistically significant ($\beta = 0.403$, $t = 2.532$, $P\text{-Value} = 0.013 < 0.05$). The results in step one were significant.

In step two when age was introduced, ERM and age accounted for 9.8 percent of the variation in financial performance. The overall model was statistically significant ($F = 4.852$, $P\text{-Value} = 0.037 < 0.05$). Beta coefficient for ERM was significant ($\beta = 0.563$, $t = 2.631$, $P\text{-Value} = 0.011 < 0.05$). Beta coefficient for age was not significant ($\beta = 0.081$, $t = 0.468$, $P\text{-Value} = 0.641 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 6.2 percent from 0.098 in step two to 0.160 in step three. Beta coefficient for interaction term was significant ($\beta = -0.146$, $t = -2.151$, $P\text{-Value} = 0.036 < 0.05$). The results in step three were significant hence moderation took effect. The results provided enough evidence to support the moderation of Top management (age) on the relationship between ERM and financial performance in Kenyan State-Owned Corporations.

Table 4.48: Moderating Influence of age on the Relationship between ERM and overall Performance

Model Summary ^d							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.332 ^a	0.110	0.093	8.19502	0.110	6.439	0.014
2	.333 ^b	0.111	0.076	8.27229	0.001	0.033	0.856
3	.442 ^c	0.195	0.147	7.94709	0.084	5.259	0.026

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	299.706	1	299.706	11.124	.014 ^b
	Residual	2424.897	90	26.943		
	Total	2724.603	91			
2	Regression	302.431	2	151.216	5.556	.049 ^c
	Residual	2422.172	89	27.215		
	Total	2724.603	91			
3	Regression	531.298	3	177.099	7.106	.018 ^d
	Residual	2193.305	88	24.924		
	Total	2724.603	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.733	6.455		2.747	0.008
	ERM	0.753	0.297	0.332	2.538	0.014
2	(Constant)	18.574	7.986		2.326	0.024
	ERM	0.747	0.302	0.329	2.475	0.017
	topman_age	-0.045	0.25	-0.024	-0.182	0.856
3	(Constant)	-51.079	31.326		-1.631	0.109
	ERM	3.806	1.365	1.677	2.788	0.007
	topman_age	4.699	2.083	2.503	2.256	0.028
	interactage_erm	-0.21	0.092	-2.736	-2.293	0.026

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_age

c. Predictors: (Constant), ERM, topman_age, interactage_erm

d. Dependent Variable: OP_Overall

Source: Primary Data (2019).

The findings in Table 4.48 indicated that in the first step, ERM accounts for 11.0 percent variation in overall performance ($R^2 = 0.110$). The model was overall significant ($F = 6.439$, $P\text{-Value} = 0.014 < 0.05$). The Beta coefficient was statistically significant ($\beta = 0.753$, $t = 2.538$, $P\text{-Value} = 0.014 < 0.05$). The results in step one were significant.

In step two when age was introduced, ERM and age accounted for 11.1 percent of the variation in overall performance. The overall model was statistically significant ($F = 3.176$, $P\text{-Value} = 0.049 < 0.05$). Beta coefficient for ERM was significant ($\beta = 0.747$, $t = 2.475$, $P\text{-Value} = 0.017 < 0.05$). Beta coefficient for age was not significant ($\beta = -0.045$, $t = -0.182$, $P\text{-Value} = 0.856 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 8.4 percent from 0.111 in step two to 0.195 in step three. The change in R^2 indicated that the interaction of ERM and age insignificantly influenced overall performance. Beta coefficient for interaction term was significant ($\beta = -0.210$, $t = -2.293$, $P\text{-Value} = 0.026 < 0.05$). The results in step three were therefore significant hence moderation took effect. The results provided enough evidence to support the moderation of age on the relationship between ERM and overall performance in Kenyan State-Owned Corporations.

Table 4.49: Moderating Influence of education on the Relationship between ERM and non-financial Performance

Model Summary ^d							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.222 ^a	0.049	0.039	3.33498	0.049	4.680	0.034
2	.274 ^b	0.075	0.052	3.8554	0.026	0.860	0.358
3	.274 ^c	0.075	0.035	3.88916	0.000	0.015	0.904

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	51.468	1	51.468	4.680	.034 ^b
	Residual	989.867	90	10.999		
	Total	1041.335	91			
2	Regression	77.737	2	38.869	3.590	.082 ^c
	Residual	963.598	89	10.827		
	Total	1041.335	91			
3	Regression	77.962	3	25.987	2.374	.174 ^d
	Residual	963.373	88	10.947		
	Total	1041.335	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.37	2.092		5.436	0.000
	ERM	0.207	0.096	0.222	2.151	0.034
2	(Constant)	9.387	3.004		3.124	0.003
	ERM	0.258	0.129	0.254	1.997	0.051
	topman_educ	0.08	0.086	0.118	0.927	0.358
3	(Constant)	8.355	9.001		0.928	0.357
	ERM	0.305	0.409	0.301	0.746	0.459
	topman_educ	0.15	0.586	0.223	0.256	0.799
	interactedu_erm	-0.003	0.026	-0.119	-0.122	0.904

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_educ

c. Predictors: (Constant), ERM, topman_educ, interactedu_erm

d. Dependent Variable: OP_Non_Financial

Source: Primary Data (2019).

The findings in Table 4.49 indicated that in the first step, ERM accounts for 4.9 percent variation in non-financial performance ($R^2 = 0.049$). The model was overall significant ($F = 4.680$, $P\text{-Value} = 0.034 < 0.05$) the beta coefficients was statistically significant ($\beta = 0.207$, $t = 2.151$, $P\text{-Value} = 0.034 < 0.05$). The results in step one were significant.

In step two when education was introduced, ERM and education accounted for 7.5 percent of the variation in non-financial performance. The overall model was not statistically significant ($F = 3.590$, $P\text{-Value} = 0.082 > 0.05$). Beta coefficient for ERM was not significant ($\beta = 0.258$, $t = 1.997$, $P\text{-Value} = 0.051 > 0.05$). Beta coefficient for education was not significant ($\beta = 0.080$, $t = 0.927$, $P\text{-Value} = 0.358 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 did not improve from step two to step three. The absence of R^2 change indicated that the interaction of ERM and education insignificantly influenced non-financial performance. Beta coefficient for interaction term was not significant ($\beta = -0.003$, $t = -0.122$, $P\text{-Value} = 0.904 > 0.05$). The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the moderation of education on the relationship between ERM and non-financial performance in Kenyan State-Owned Corporations.

Table 4.50: Moderating Influence of education on the Relationship between ERM and financial Performance

Model Summary ^d							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.263 ^a	0.069	0.059	5.50893	0.069	6.707	0.013
2	.328 ^b	0.107	0.085	6.25319	0.038	0.865	0.356
3	.373 ^c	0.139	0.106	6.18331	0.032	2.341	0.131

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	194.513	1	194.513	6.707	.013 ^b
	Residual	2609.956	90	29.000		
	Total	2804.469	91			
2	Regression	300.876	2	150.438	5.348	.027 ^c
	Residual	2503.593	89	28.130		
	Total	2804.469	91			
3	Regression	390.385	3	130.128	4.744	.023 ^d
	Residual	2414.084	88	27.433		
	Total	2804.469	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.313	3.457		2.694	0.008
	ERM	0.403	0.159	0.263	2.532	0.013
2	(Constant)	7.42	4.807		1.544	0.128
	ERM	0.595	0.217	0.344	2.748	0.008
	topman_educ	-0.13	0.14	-0.116	-0.93	0.356
3	(Constant)	-12.416	13.808		-0.899	0.372
	ERM	1.522	0.643	0.88	2.369	0.021
	topman_educ	1.246	0.91	1.114	1.369	0.176
	interactedu_erm	-0.064	0.042	-1.451	-1.53	0.131

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_educ

c. Predictors: (Constant), ERM, topman_educ, interactedu_erm

d. Dependent Variable: OP_Financial

Source: Primary Data (2019)

The findings in Table 4.50 indicate that in the first step, ERM accounts for 6.9 percent variation in financial performance ($R^2 = 0.069$). The model was overall significant ($F = 6.707$, $P\text{-Value} = 0.013 < 0.05$) the beta coefficient was statistically significant ($\beta = 0.403$, $t = 2.532$, $P\text{-Value} = 0.013 < 0.05$). The results in step one were significant.

In step two when top management (education) was introduced, ERM and education accounted for 10.7 percent of the variation in financial performance. The overall model was statistically significant ($F = 5.438$, $P\text{-Value} = 0.027 < 0.05$). Beta coefficient for ERM was significant ($\beta = 0.595$, $t = 2.748$, $P\text{-Value} = 0.008 < 0.05$). Beta coefficient for top management (education) was not significant ($\beta = -0.130$, $t = -0.930$, $P\text{-Value} = 0.356 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 3.2 percent from 0.107 in step two to 0.139 in step three. The insignificant R^2 change indicated that the interaction of ERM and education insignificantly influenced financial performance. Beta coefficient for interaction term was not significant ($\beta = -0.064$, $t = -1.451$, $P\text{-Value} = 0.131 > 0.05$). The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the moderation of Top management (education) on the relationship between ERM and financial performance in Kenyan State-Owned Corporations.

Table 4.51: Moderating Influence of education on the Relationship between ERM and overall Performance

Model Summary ^d								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	Sig. F Change	
1	.332 ^a	0.110	0.093	8.19502	0.110	6.439	0.014	
2	.346 ^b	0.119	0.085	8.23200	0.009	0.534	0.468	
3	.397 ^c	0.157	0.107	8.13305	0.038	2.249	0.140	

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	299.706	1	299.706	11.124	.014 ^b
	Residual	2424.897	90	26.943		
	Total	2724.603	91			
2	Regression	324.228	2	234.314	8.688	.039 ^c
	Residual	2400.375	89	26.971		
	Total	2724.603	91			
3	Regression	427.763	3	142.588	5.463	.034 ^d
	Residual	2296.840	88	26.100		
	Total	2724.603	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.733	6.455		2.747	0.008
	ERM	0.753	0.297	0.332	2.538	0.014
2	(Constant)	19.309	6.833		2.826	0.007
	ERM	0.786	0.302	0.346	2.607	0.012
	topman_educ	-0.145	0.198	-0.097	-0.731	0.468
3	(Constant)	-8.275	19.595		-0.422	0.675
	ERM	2.075	0.909	0.914	2.281	0.027
	topman_educ	1.732	1.266	1.163	1.367	0.178
	interactedu_erm	-0.087	0.058	-1.47	-1.5	0.14

a. Dependent Variable: OP_Overall

b. Predictors: (Constant), ERM

c. Predictors: (Constant), ERM, topman_educ

d. Predictors: (Constant), ERM, topman_educ, interactedu_erm

Source: Primary Data (2019)

The findings in Table 4.51 indicated that in the first step, ERM accounts for 11.0 percent variation in overall performance ($R^2 = 0.110$). Overall, the model was significant ($F = 11.124$, $P\text{-Value} = 0.014 < 0.05$) the beta coefficient was statistically significant ($\beta = 0.753$, $t = 2.538$, $P\text{-Value} = 0.014 < 0.05$). The results in step one were significant.

In step two when education was introduced, ERM and education accounted for 11.9 percent of the variation in overall performance. The overall model was statistically significant ($F = 8.688$, $P\text{-Value} = 0.039 < 0.05$). Beta coefficient for ERM was significant ($\beta = 0.786$, $t = 2.607$, $P\text{-Value} = 0.012 < 0.05$). Beta coefficient for education was not significant ($\beta = -0.145$, $t = -0.731$, $P\text{-Value} = 0.468 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 3.8 percent from 0.119 in step two to 0.157 in step three. The R^2 change indicated that the interaction of ERM and education insignificantly influenced overall performance. Beta coefficient for interaction term was not significant ($\beta = -0.087$, $t = -1.500$, $P\text{-Value} = 0.14 > 0.05$). The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the moderation of education on the relationship between ERM and overall performance in Kenyan State-Owned Corporations.

Table 4.52: Moderating Influence of functional background on the Relationship between ERM and non-financial Performance

Model Summary^d								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	Sig. F Change	
1	.222 ^a	0.049	0.039	3.33498	0.049	4.680	0.034	
2	.259 ^b	0.067	0.044	3.88393	0.018	0.001	0.975	
3	.294 ^c	0.086	0.049	3.87262	0.019	1.328	0.254	
ANOVA^a								
Model		Sum of Squares	Df	Mean Square	F	Sig.		
	Regression	51.468	1	51.468	4.680	.034 ^b		
1	Residual	989.867	90	10.999				
	Total	1041.335	91					
	Regression	70.110	2	35.055	3.212	.107 ^c		
2	Residual	971.225	89	10.913				
	Total	1041.335	91					
	Regression	90.022	3	30.007	2.776	.125 ^d		
3	Residual	951.313	88	10.810				
	Total	1041.335	91					
Coefficients^a								
Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.		
	1	(Constant)	11.37	2.092		5.436	0.000	
		ERM	0.207	0.096	0.222	2.151	0.034	
	2	(Constant)	10.15	3.329		3.049	0.004	
		ERM	0.28	0.13	0.277	2.154	0.036	
		topman_funbackg	0.003	0.105	0.004	0.031	0.975	
	3	(Constant)	24.176	12.617		1.916	0.061	
		ERM	-0.356	0.567	-0.351	-0.627	0.533	
		topman_funbackg	-0.853	0.75	-1.042	-1.137	0.261	
		interactfunback_erm	0.039	0.034	1.241	1.152	0.254	

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_funbackg

c. Predictors: (Constant), ERM, topman_funbackg, interactfunback_erm

d. Dependent Variable: OP_Non_Financial

Source: Primary Data (2019)

The findings in Table 4.52 indicated that in the first step, ERM accounts for 4.9 percent variation in non-financial performance ($R^2 = 0.049$). The model was overall significant ($F = 4.680$, $P\text{-Value} = 0.034 < 0.05$) the beta coefficients was statistically significant ($\beta = 0.207$, $t = 2.151$, $P\text{-Value} = 0.034 < 0.05$). The results in step one were significant.

In step two when functional background was introduced, ERM and functional background accounted for 6.7 percent of the variation in non-financial performance. The overall model was not statistically significant ($F = 3.212$, $P\text{-Value} = 0.107 > 0.05$). Beta coefficient for ERM was significant ($\beta = 0.280$, $t = 2.154$, $P\text{-Value} = 0.036 < 0.05$), beta for functional background was not significant ($\beta = 0.003$, $t = 0.031$, $P\text{-Value} = 0.975 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 1.9 from 0.067 in step two to 0.086 in step three. The change in R^2 indicated that the interaction of ERM and functional background insignificantly influenced non-financial performance. Beta coefficient for interaction term was not significant ($\beta = 0.039$, $t = 1.152$, $P\text{-Value} = 0.254 > 0.05$). The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the moderation of functional background on the relationship between ERM and non-financial performance in Kenyan State-Owned Corporations.

Table 4.53: Moderating Influence of functional background on the Relationship between ERM and financial Performance

Model Summary ^d								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	Sig. F Change	
1	.263 ^a	0.069	0.059	5.50893	0.069	6.707	0.013	
2	.332 ^b	0.110	0.089	6.24173	0.041	1.085	0.302	
3	.334 ^c	0.112	0.074	6.29068	0.002	0.085	0.771	

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	194.513	1	194.513	6.707	.013 ^b
	Residual	2609.956	90	29.000		
	Total	2804.469	91			
2	Regression	309.328	2	154.664	5.517	.024 ^c
	Residual	2495.141	89	28.035		
	Total	2804.469	91			
3	Regression	312.703	3	104.234	3.681	.058 ^d
	Residual	2491.766	88	28.316		
	Total	2804.469	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.313	3.457		2.694	0.008
	ERM	0.403	0.159	0.263	2.532	0.013
2	(Constant)	8.927	5.308		1.682	0.098
	ERM	0.57	0.212	0.329	2.686	0.009
	topman_funbackg	-0.17	0.163	-0.128	-1.041	0.302
3	(Constant)	3.808	18.325		0.208	0.836
	ERM	0.807	0.841	0.466	0.96	0.341
	topman_funbackg	0.131	1.045	0.099	0.126	0.9
	interactfunback_erm	-0.014	0.048	-0.275	-0.292	0.771

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_funbackg

c. Predictors: (Constant), ERM, topman_funbackg, interactfunback_erm

d. Dependent Variable: OP_Financial

Source: Primary Data (2019)

The findings in Table 4.53 indicated that in the first step, ERM accounts for 6.9 percent variation in financial performance ($R^2 = 0.069$). The model was overall significant ($F = 6.707$, $P\text{-Value} = 0.013 < 0.05$) the beta coefficients was statistically significant ($\beta = 0.403$, $t = 2.532$, $P\text{-Value} = 0.013 < 0.05$). The results in step one were significant.

In step two when functional background was introduced, ERM and functional background accounted for 11 percent of the variation in financial performance. The overall model was statistically significant ($F = 5.517$, $P\text{-Value} = 0.024 < 0.05$). Beta coefficient for ERM was significant ($\beta = 0.570$, $t = 2.686$, $P\text{-Value} = 0.009 < 0.05$). Beta coefficient for functional background was not significant ($\beta = -.170$, $t = -1.041$, $P\text{-Value} = 0.302 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 0.2 percent from 0.11 in step two to 0.112 in step three. The insignificant R^2 change indicated that the interaction of ERM and functional background insignificantly influenced financial performance. Beta coefficient for interaction term was not significant ($\beta = -0.014$, $t = -0.292$, $P\text{-Value} = 0.771 > 0.05$). The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the moderation of functional background on the relationship between ERM and financial performance in Kenyan State-Owned Corporations.

Table 4.54: Moderating Influence of functional background on the Relationship between ERM and overall Performance

Model Summary ^d								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	Sig. F Change	
1	.332 ^a	0.110	0.093	8.19502	0.110	6.439	0.014	
2	.344 ^b	0.119	0.089	6.24173	0.009	1.085	0.302	
3	.346 ^c	0.120	0.074	6.29068	0.001	0.085	0.771	

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	299.706	1	299.706	11.124	.014 ^b
	Residual	2424.897	90	26.943		
	Total	2724.603	91			
2	Regression	324.228	2	162.114	6.011	.024 ^c
	Residual	2400.375	89	26.971		
	Total	2724.603	91			
3	Regression	326.952	3	108.984	4.000	.058 ^d
	Residual	2397.651	88	27.246		
	Total	2724.603	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.733	6.455		2.747	0.008
	ERM	0.753	0.297	0.332	2.538	0.014
2	(Constant)	8.927	5.308		1.682	0.098
	ERM	0.570	0.212	0.329	2.686	0.009
	topman_funbackg	-0.170	0.163	-0.128	-1.041	0.302
3	(Constant)	3.808	18.325		0.208	0.836
	ERM	0.807	0.841	0.466	0.960	0.341
	topman_funbackg	0.131	1.045	0.099	0.126	0.900
	interactfunback_erm	-0.014	0.048	-0.275	-0.292	0.771

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_funbackg

c. Predictors: (Constant), ERM, topman_funbackg, interactfunback_erm

d. Dependent Variable: OP_Overall

Source: Primary Data (2019)

The findings in Table 4.54 indicated that in the first step, ERM accounts for 11 percent variation in overall performance ($R^2 = 0.110$). The model was overall significant ($F = 11.124$, $P\text{-Value} = 0.014 < 0.05$) the beta coefficients was statistically significant ($\beta = 0.753$, $t = 2.538$, $P\text{-Value} = 0.014 < 0.05$). The results in step one were significant.

In step two when functional background education was introduced, ERM and functional background accounted for 11.9 percent of the variation in overall performance. The overall model was statistically significant ($F = 6.011$, $P\text{-Value} = 0.024 < 0.05$). Beta coefficient for ERM was significant ($\beta = 0.570$, $t = 2.686$, $P\text{-Value} = 0.009 < 0.05$). Beta coefficient for functional background was not significant ($\beta = -0.170$, $t = -1.041$, $P\text{-Value} = 0.302 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 0.1 percent from 0.119 in step two to 0.120 in step three. The insignificant R^2 change indicated that the interaction of ERM and functional background education insignificantly influenced overall performance. Beta coefficient for interaction term was not significant ($\beta = -0.014$, $t = -.292$, $P\text{-Value} = 0.771 > 0.05$). The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the moderation of functional background on the relationship between ERM and overall performance in Kenyan State-Owned Corporations.

Table 4.55: Moderating Influence of tenure on the Relationship between ERM and non-financial Performance

Model Summary ^d								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	Sig. F Change	
1	.222 ^a	0.049	0.039	3.33498	0.049	4.680	0.034	
2	.234 ^b	0.055	0.03	3.8929	0.006	0.199	0.658	
3	.250 ^c	0.062	0.022	3.90929	0.007	0.54	0.466	

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.468	1	51.468	4.680	.034 ^b
	Residual	989.867	90	10.999		
	Total	1041.335	91			
2	Regression	56.779	2	28.389	2.566	.163 ^c
	Residual	984.556	89	11.062		
	Total	1041.335	91			
3	Regression	65.027	3	21.676	1.954	.247 ^d
	Residual	976.308	88	11.094		
	Total	1041.335	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.37	2.092		5.436	0.000
	ERM	0.207	0.096	0.222	2.151	0.034
2	(Constant)	11.128	2.972		3.744	0.000
	ERM	0.259	0.134	0.258	1.935	0.058
	topman_tenure	-0.039	0.087	-0.059	-0.446	0.658
3	(Constant)	4.357	9.688		0.45	0.655
	ERM	0.559	0.43	0.556	1.301	0.199
	topman_tenure	0.439	0.656	0.676	0.669	0.506
	interacttenure_erm	-0.021	0.029	-0.853	-0.735	0.466

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_tenure

c. Predictors: (Constant), ERM, topman_tenure, interacttenure_erm

d. Dependent Variable: OP_Non_Financial

Source: Primary Data (2019)

The findings in Table 4.55 indicated that in the first step, ERM accounts for 4.9 percent variation in non-financial performance ($R^2 = 0.049$). The model was overall significant ($F = 4.680$, $P\text{-Value} = 0.034 < 0.05$). The beta coefficients were statistically significant ($\beta = 0.207$, $t = 2.151$, $P\text{-Value} = 0.034 < 0.05$). The results in step one were significant.

In step two when tenure background was introduced, ERM and tenure accounted for 5.5 percent of the variation in non-financial performance. The overall model was not statistically significant ($F = 2.566$, $P\text{-Value} = 0.163 > 0.05$). Beta coefficient for ERM was not significant ($\beta = 0.247$, $t = 1.897$, $P\text{-Value} = 0.063 > 0.05$). Beta coefficient for tenure was not significant ($\beta = -.039$, $t = -.446$, $P\text{-Value} = 0.658 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 0.007 from 0.055 in step two to 0.062 in step three. The insignificant change in R^2 indicated that the interaction of ERM and functional background insignificantly influenced non-financial performance. Beta coefficient for interaction term was not significant ($\beta = -0.021$, $t = 0.735$, $P\text{-Value} = 0.466 > 0.05$). The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the moderation of Top management (tenure) on the relationship between ERM and non-financial performance in Kenyan State-Owned Corporations.

Table 4.56: Moderating Influence of tenure on the Relationship between ERM and financial Performance

Model Summary ^d								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	Sig. F Change	
1	.263 ^a	0.069	0.059	5.50893	0.069	6.707	0.013	
2	.334 ^b	0.112	0.081	4.92032	0.043	0.803	0.374	
3	.347 ^c	0.120	0.073	4.94001	0.008	0.547	0.463	

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	194.513	1	194.513	6.707	.013 ^b
	Residual	2609.956	90	29.000		
	Total	2804.469	91			
2	Regression	314.101	2	157.051	5.613	.034 ^c
	Residual	2490.368	89	27.982		
	Total	2804.469	91			
3	Regression	336.894	3	112.298	4.005	.065 ^d
	Residual	2467.575	88	28.041		
	Total	2804.469	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.313	3.457		2.694	0.008
	ERM	0.403	0.159	0.263	2.532	0.013
2	(Constant)	7.939	3.697		2.147	0.036
	ERM	0.356	0.185	0.264	1.921	0.06
	topman_tenure	0.111	0.123	0.123	0.896	0.374
3	(Constant)	16.449	12.093		1.36	0.179
	ERM	-0.035	0.561	-0.026	-0.063	0.95
	topman_tenure	-0.488	0.818	-0.543	-0.596	0.554
	interacttenure_erm	0.027	0.036	0.834	0.739	0.463

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_tenure

c. Predictors: (Constant), ERM, topman_tenure, interacttenure_erm

d. Dependent Variable: OP_Financial

Source: Primary Data (2019)

The findings in Table 4.56 indicated that in the first step, ERM accounts for 6.9 percent variation in financial performance ($R^2 = 0.069$). The model was overall significant ($F = 6.707$, $P\text{-Value} = 0.013 < 0.05$) the beta coefficient was statistically significant ($\beta = 0.403$, $t = 2.532$, $P\text{-Value} = 0.013 < 0.05$). The results in step one were significant.

In step two when tenure was introduced, ERM and tenure accounted for 11.2 percent of the variation in financial performance. The overall model was statistically significant ($F = 5.613$, $P\text{-Value} = 0.034 < 0.05$). Beta coefficient for ERM was significant ($\beta = 0.356$, $t = 1.921$, $P\text{-Value} = 0.06 < 0.05$). Beta coefficient for tenure was not significant ($\beta = 0.111$, $t = -0.896$, $P\text{-Value} = 0.374 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 0.8 percent from 0.112 in step two to 0.120 in step three. The insignificant change in R^2 indicated that the interaction of ERM and tenure insignificantly influenced financial performance. Beta coefficient for interaction term was not significant ($\beta = -0.027$, $t = 0.739$, $P\text{-Value} = 0.463 > 0.05$). The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the moderation of Top management (tenure) on the relationship between ERM and financial performance in Kenyan State-Owned Corporations.

Table 4.57: Moderating Influence of tenure on the Relationship between ERM and overall Performance

Model Summary ^d							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.332 ^a	0.110	0.093	8.19502	0.110	6.439	0.014
2	.342 ^b	0.117	0.081	6.60552	0.007	0.942	0.337
3	.352 ^c	0.124	0.069	6.64746	0.007	0.384	0.039

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	299.706	1	299.706	11.124	.014 ^b
	Residual	2424.897	90	26.943		
	Total	2724.603	91			
2	Regression	318.779	2	159.389	5.896	.047 ^c
	Residual	2405.824	89	27.032		
	Total	2724.603	91			
3	Regression	337.851	3	112.617	4.152	.093 ^d
	Residual	2386.752	88	27.122		
	Total	2724.603	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.733	6.455		2.747	0.008
	ERM	0.753	0.297	0.332	2.538	0.014
2	(Constant)	19.885	5.339		3.724	0.001
	ERM	0.481	0.26	0.266	1.854	0.07
	topman_tenure	0.168	0.173	0.139	0.97	0.337
3	(Constant)	30.29	17.635		1.718	0.092
	ERM	0.002	0.816	0.001	0.003	0.998
	topman_tenure	-0.55	1.171	-0.456	-0.469	0.641
	interacttenure_erm	0.032	0.012	0.029	2.667	0.039

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_tenure

c. Predictors: (Constant), ERM, topman_tenure, interacttenure_erm

d. Dependent Variable: OP_Overall

Source: Primary Data (2019)

The findings in Table 4.57 indicated that in the first step, ERM accounts for 101 percent variation in overall performance ($R^2 = 0.10$). The model was overall significant ($F =$

11.124, P-Value= 0.014<0.05). Beta coefficient was statistically significant ($\beta= 0.753$, $t=2.538$, P-Value= 0.014<0.05). The results in step one were significant.

In step two when tenure was introduced, ERM and tenure accounted for 11.7 percent of the variation in overall performance. The overall model was statistically significant ($F= 5.896$, P-Value= 0.047<0.05). Beta coefficient for ERM was not significant ($\beta= 0.481$, $t=1.854$, P-Value=0.070>0.05), beta for tenure was not significant ($\beta=.168$, $t=.970$, P-Value= 0.337>0.05). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 0.7 percent from 0.117 in step two to 0.124 in step three. The insignificant change in R^2 indicated that the interaction of ERM and tenure insignificantly influenced overall performance. Beta coefficient for interaction term was significant ($\beta=.032$, $t=2.667$, P-Value=0.039<0.05). The results in step three were significant hence moderation took effect. The results provided enough evidence to support the moderation of Top management (tenure) on the relationship between ERM and overall performance in Kenyan State-Owned Corporations.

Table 4.58: Moderating Influence of gender on the Relationship between ERM and non-financial Performance

Model Summary^d

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.222 ^a	0.049	0.039	3.33498	0.049	4.680	0.034
2	.262 ^b	0.069	0.046	3.85691	0.020	1.510	0.224
3	.262 ^c	0.069	0.029	3.89157	0.000	0.007	0.934

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.468	1	51.468	4.680	.034 ^b
	Residual	989.867	90	10.999		
	Total	1041.335	91			
2	Regression	71.459	2	35.729	3.279	.100 ^c
	Residual	969.876	89	10.897		
	Total	1041.335	91			
3	Regression	71.565	3	23.855	2.165	.206 ^d
	Residual	969.770	88	11.020		
	Total	1041.335	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.37	2.092		5.436	0.000
	ERM	0.207	0.096	0.222	2.151	0.034
	(Constant)	12.296	3.172		3.876	0.000
2	ERM	0.262	0.136	0.248	1.925	0.059
	topman_gender	-0.108	0.088	-0.158	-1.229	0.224
	(Constant)	13.188	11.118		1.186	0.241
3	ERM	0.222	0.491	0.211	0.453	0.653
	topman_gender	-0.17	0.739	-0.248	-0.23	0.819
	interactgender_erm	0.003	0.032	0.101	0.084	0.934

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_gender

c. Predictors: (Constant), ERM, topman_gender, interactgender_erm

d. Dependent Variable: OP_Non_Financial

Source: Primary Data (2019)

The findings in Table 4.52 indicated that in the first step, ERM accounts for 4.9 percent variation in non-financial performance ($R^2 = 0.049$). The model was overall significant

($F= 4.680$, $P\text{-Value}= 0.034 < 0.05$) the beta coefficients was statistically significant ($\beta= 0.207$, $t=2.151$, $P\text{-Value}= 0.034 < 0.05$). The results in step one were significant.

In step two when gender background was introduced, ERM and gender accounted for 6.9 percent of the variation in non-financial performance. The overall model was not statistically significant ($F= 3.279$, $P\text{-Value}= 0.100 > 0.05$). Beta coefficient for ERM was not significant ($\beta= 0.262$, $t=1.925$, $P\text{-Value}=0.059 > 0.05$). Beta coefficient for gender was not significant ($\beta= -0.108$, $t=-1.229$, $P\text{-Value}= 0.224 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 did not improve from step two to step three. The absence of R^2 change indicated that the interaction of ERM and gender insignificantly influenced non-financial performance. Beta coefficient for interaction term was not significant ($\beta=.003$, $t= 0.084$, $P\text{-Value}=0.934 > 0.05$). The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the moderation of gender on the relationship between ERM and non-financial performance in Kenyan State-Owned Corporations.

Table 4.59: Moderating Influence of gender on the Relationship between ERM and financial Performance

Model Summary ^d								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	Sig. F Change	
1	.263 ^a	0.069	0.059	5.50893	0.069	6.707	0.013	
2	.284 ^b	0.081	0.058	6.32782	0.012	0.289	0.593	
3	.287 ^c	0.082	0.043	6.37746	0.001	0.101	0.752	

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	194.513	1	194.513	6.707	.013 ^b
	Residual	2609.956	90	29.000		
	Total	2804.469	91			
2	Regression	226.865	2	113.432	3.917	.067 ^c
	Residual	2577.604	89	28.962		
	Total	2804.469	91			
3	Regression	230.955	3	76.985	2.632	.141 ^d
	Residual	2573.514	88	29.244		
	Total	2804.469	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.313	3.457		2.694	0.008
	ERM	0.403	0.159	0.263	2.532	0.013
2	(Constant)	7.516	5.099		1.474	0.146
	ERM	0.552	0.232	0.306	2.38	0.021
	topman_gender	-0.077	0.142	-0.069	-0.538	0.593
3	(Constant)	11.739	14.272		0.822	0.414
	ERM	0.36	0.652	0.199	0.552	0.583
	topman_gender	-0.386	0.986	-0.349	-0.391	0.697
	interactgender_erm	0.014	0.044	0.323	0.317	0.752

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_gender

c. Predictors: (Constant), ERM, topman_gender, interactgender_erm

d. Dependent Variable: OP_Financial

Source: Primary Data (2019)

The findings in Table 4.59 indicated that in the first step, ERM accounts for 6.9 percent variation in financial performance ($R^2 = 0.069$). The model was overall significant ($F = 6.707$, $P\text{-Value} = 0.013 < 0.05$) the beta coefficients was statistically significant ($\beta = 0.403$, $t = 2.532$, $P\text{-Value} = 0.013 < 0.05$). The results in step one were significant.

In step two when gender was introduced, ERM and gender accounted for 8.1 percent of the variation in financial performance. The overall model was not statistically significant ($F = 3.917$, $P\text{-Value} = 0.067 < 0.05$). Beta coefficient for ERM was significant ($\beta = 0.552$, $t = 2.380$, $P\text{-Value} = 0.021 < 0.05$). Beta coefficient for gender was not significant ($\beta = -.770$, $t = -.538$, $P\text{-Value} = 0.593 > 0.05$). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 0.1 percent from 0.081 in step two to 0.082 in step three. The insignificant change R^2 in indicated that the interaction of ERM and gender insignificantly influenced financial performance. Beta coefficient for interaction term was not significant ($\beta = 0.014$, $t = .317$, $P\text{-Value} = 0.752 > 0.05$). The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the moderation of gender on the relationship between ERM and financial performance in Kenyan State-Owned Corporations

Table 4.60: Moderating Influence of gender on the Relationship between ERM and overall Performance

Model Summary ^d								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	Sig. F Change	
1	.332 ^a	0.110	0.093	8.19502	0.110	6.439	0.014	
2	.349 ^b	0.122	0.086	8.27257	0.012	0.647	0.425	
3	.354 ^c	0.125	0.074	8.34129	0.003	0.180	0.674	

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	299.706	1	299.706	11.124	.014 ^b
	Residual	2424.897	90	26.943		
	Total	2724.603	91			
2	Regression	332.402	2	166.201	6.183	.080 ^c
	Residual	2392.201	89	26.879		
	Total	2724.603	91			
3	Regression	340.575	3	113.525	4.190	.159 ^d
	Residual	2384.028	88	27.091		
	Total	2724.603	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	17.733	6.455		2.747	0.008
	ERM	0.753	0.297	0.332	2.538	0.014
2	(Constant)	20.961	7.28		2.879	0.006
	ERM	0.733	0.323	0.310	2.267	0.028
	topman_gender	-0.165	0.205	-0.110	-0.804	0.425
3	(Constant)	31.057	24.929		1.246	0.219
	ERM	0.276	1.125	0.117	0.246	0.807
	topman_gender	-0.855	1.642	-0.570	-0.521	0.605
	interactgender_erm	0.031	0.073	0.532	0.424	0.674

a. Predictors: (Constant), ERM

b. Predictors: (Constant), ERM, topman_gender

c. Predictors: (Constant), ERM, topman_gender, interactgender_erm

d. Dependent Variable: OP_Overall

Source: Primary Data (2019)

The findings in Table 4.54 indicated that in the first step, ERM accounts for 11 percent variation in overall performance ($R^2 = 0.110$). The model was overall significant ($F =$

11.124, P-Value= 0.014<0.05) the beta coefficient was statistically significant ($\beta=0.753$, $t=2.538$, P-Value= 0.014<0.05). The results in step one were significant.

In step two when gender was introduced, ERM and gender accounted for 12.2 percent of the variation in overall performance. The overall model was not statistically significant ($F= 6.183$, P-Value= 0.080>0.05). Beta coefficient for ERM was significant ($\beta= 0.733$, $t=2.267$, P-Value=0.028<0.05). Beta coefficient for gender was not significant ($\beta=-.165$, $t=-.804$, P-Value= 0.425>0.05). The results in step two were not significant.

In step three, the interaction term was introduced in the model. The findings showed that R^2 improved by 0.3 percent from 0.122 in step two to 0.125 in step three. The insignificant change in R^2 indicated that the interaction of ERM and gender insignificantly influenced overall performance. Beta coefficient for interaction term was not significant ($\beta=.031$, $t=.424$, P-Value=0.674>0.05). The results in step three were not significant hence moderation did not take effect. The results did not provide enough evidence to support the hypothesis that gender moderate the relationship between ERM and overall performance in Kenyan State-Owned Corporations.

4.9.4 The Joint Effect of Enterprise Risk Management, Top Management Demographics and Macro Environment on Performance of Kenyan SOEs

The fourth and final objective of this study was to establish the Joint Effect of Enterprise Risk Management, Top Management Demographics and Macro Environment on Performance of Kenyan State-Owned Corporations. The following hypothesis was formulated and tested. Culp (2002) noted that Top management teams are critical in understanding contexts within which organizations are operating including the risks emanating from the environment thereby creating a fit to enhance organizational

performance. This suggests that there is a need to consider the collective effect of Enterprise risk management, Top Management Demographics and Macro environment on organizational performance.

Towards the achievement of this objective, the study set a corresponding hypothesis, ***H₀₄: ERM, TMD and ME have no significant influence on the performance in Kenyan State Owned Corporations.*** This hypothesis was tested using simple linear regression analysis for individual independent effect and multiple regression analysis for joint effect. The results are presented in Table 4.61.

Table 4.61: Regression Results for the Individual Effect of ERM and joint effect of ERM, TMD and ME on Organizational Performance

Model Summary ^d							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.456 ^a	0.208	0.147	6.54375	0.208	23.636	0.027
2	.454 ^b	0.206	0.166	6.46884	-0.002	0.089	0.766
3	.437 ^c	0.191	0.171	6.44959	-0.015	0.756	0.390

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	840.851	1	840.851	23.636	.027 ^b
	Residual	3201.700	90	35.574		
	Total	4042.551	91			
2	Regression	832.766	2	416.383	11.545	.010 ^c
	Residual	3209.785	89	36.065		
	Total	4042.551	91			
3	Regression	772.127	3	257.376	6.925	.003 ^d
	Residual	3270.424	88	37.164		
	Total	4042.551	91			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.319	7.762		1.329	0.191
	ERM	0.246	0.277	0.133	0.887	0.380
	ME_combined	1.054	0.415	0.42	2.542	0.015
	TMD	-0.095	0.317	-0.049	-0.299	0.766
2	(Constant)	9.943	7.572		1.313	0.197
	ERM	0.237	0.272	0.128	0.87	0.390
	ME_combined	1	0.37	0.399	2.704	0.010
3	(Constant)	13.234	6.538		2.024	0.050
	ME_combined	1.095	0.352	0.437	3.109	0.003

a. Dependent Variable: OP_Overall

b. Predictors: (Constant), ERM, ME_combined

c. Predictors: (Constant), ME_combined

d. Dependent Variable: OP_Overall

Source: Primary Data (2019)

The findings in Table 4.61 show that the influence of ERM on organizational performance was significant ($R^2=0.191$, $F= 6.925$, $P\text{-Value}=0.003<0.05$). This means that 19.1 percent of the variation in organizational performance could be accounted for by the variation in ERM. The model was overall significant ($F= 6.925$, $P\text{-Value}=0.003<0.05$).

The results further showed that the joint effect of ERM, TMD and ME on organizational performance was significant ($R^2=0.208$, $F=23.636$, $P\text{-Value}=0.027<0.05$). This implied that 20.8 percent of the variation in organizational performance jointly could be explained by the changes in ERM, TMD and Macro environment. The F ratio ($F=23.636$, $P\text{-Value}=0.027<0.05$) showed that the model of ERM, TMD and Macro environment on organizational performance was significant. The results confirmed that the joint effect of ERM, TMD and Macro environment when regressed on organizational performance was greater than the individual effect of ERM when regressed on organizational performance. The predictive model was of the form:

$$Y = 10.319 + 0.246\text{ERM} - 0.095\text{TMD} + 1.054\text{ME}$$

The above equation indicated that the value of performance was 10.319 when ERM, TMD and Macro Environment was equal to zero. Further, for every Unit increase in ERM, organizational performance increased by 0.246, it was also revealed that for every Unit increase in TMD, organizational performance decreased by 0.095 whereas for every Unit increase in Macro environment organizational performance increased by 1.054 other factors held constant.

It was therefore established that, the hypothesis that the joint influence of Enterprise Risk Management, Top Management Demographics and Macro-environment on the performance of Kenyan State-Owned Corporations is positive and significant.

4.10 Summary of Hypotheses Testing

This study intended to determine the effect of Macro environment and top management demographics on the relationship between enterprise risk management and performance in Kenyan State-Owned corporations. To achieve this overall objective, four hypotheses were enumerated. Table 4.62 gives a summary of the objectives, corresponding hypotheses that guided the study, the results and conclusion on the hypotheses. Both linear and multiple regression analysis were used to analyze the data.

Table 4.62: Summary of Hypotheses Conclusions

Hypothesis	Results	Remarks
ERM has no significant effect on performance in Kenyan State-Owned Corporations	$R^2=0.065$ $F=5.945$, P-Value= $0.017 < 0.05$ $\beta=0.479$, $t=2.438$, P-Value= $0.017 < 0.05$	Rejected
Macro environment has no significant influence on the relationship between ERM and performance in Kenyan State-Owned Corporations	$R^2=0.109$ $F= 3.547$, P-Value= $0.018 < 0.05$ $\beta= -0.044$, $t=-1.554$, P-Value= $0.124 > 0.05$	Failed to reject
Top management demographics has no significant influence on the relationship between ERM and performance in Kenyan State-Owned Corporations	$R^2=0.103$ $F= 3.37$, P-Value= $0.022 < 0.05$ $\beta= -0.032$, $t=-1.847$, P-Value= $0.048 < 0.05$	Rejected
ERM, TMD and ME have no significant influence on the performance in Kenyan State-Owned Corporations	$R^2=0.208$, $F=9.665$, P-Value= $0.027 < 0.05$	Rejected

Source: Primary Data (2019)

From the results in Table 4.62, there is a statistically significant and positive association between Enterprise risk management and performance of Kenyan state-owned corporations. It was established that Macro environment did not moderate the relationship between Enterprise risk management and performance of Kenyan state-owned corporations. However, the study revealed that top management demographics moderated the relationships between Enterprise risk management and performance of Kenyan state-owned corporations. Regarding the joint effects of Enterprise risk management, macro environment and top management demographics on performance of Kenyan state-owned corporations, the results reveal that the joint effect was positive and significant on performance of Kenyan state-owned corporations.

4.11 Chapter Summary

Chapter four presented the findings of the study. It began with the response rate of the respondents being set out, followed by the results from the reliability and validity tests. The descriptive statistics and varied regression results were then presented relating to enterprise risk management, macro environment, top management demographics and organizational performance. Lastly, the hypotheses tests results were presented.

The next chapter discusses the findings in chapter four. Each objective of this study is set out in its respective section. The objective and study hypothesis are set out before the findings are discussed. The established findings are thereafter compared and contrasted with those of other related studies and with expectations and with the advancement from the relevant theory. Conclusions are thereafter set out relating to whether the hypothesis was supported or not supported.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter presents the results of hypothesis test as guided by the research objectives and findings from the testing of hypotheses in chapter four. The discussions are presented for each of the specific objectives. Firstly, the objective is laid out and the relating hypothesis specified. The approach adopted in testing the hypothesis is then discussed. Finally, the conclusions are outlined alongside a comparison with the literature review. The discussions have been done along conceptual, empirical and theoretical spheres as guided by the anchoring theories. The theories that underpinned this study included contingency theory of enterprise risk management, open systems theory, upper echelons' theory and stakeholders theory.

The study was conceptualized along four main variables namely Enterprise risk management, macro environment, top management demographics and organizational performance. The variables were measured using 17 sub-variables. Macro environment and Top management demographics moderated the relationship between ERM and organizational performance. Enterprise risk management the study's independent variable was measured using 4 sub-variables consisting 27 items while Macro environment that played a moderating role was measured using 6 sub-variables consisting of 26 items. The second moderating variable was top management demographics which was measured using 5 sub-variables made up of 7 items whereas organizational performance which was the dependent variable was measured using 2 sub-variable made up of 5 items.

The influence of Enterprise risk management on the performance of Kenya owned State Corporations was first tested. The study found that the influence of ERM on

organizational financial, non-financial and overall performance was significant. The study further examined the moderating influence of Macro environment on the relationship between Enterprise risk management and organizational performance. Macro environment was found not to have a significant moderating effect on the relationship. Top management demographics had a significant moderating effect on the relationship between Enterprise risk management and overall organizational performance. Finally, the study found that Enterprise risk management, Macro environment and Top management demographics jointly had a significant effect on the overall organizational performance.

5.2 Enterprise Risk Management and Organizational Performance

The first objective of the study was to determine the effect of enterprise risk management on performance of Kenyan owned State Corporations. To establish the objective, the corresponding hypothesis tests were undertaken, to determine the percentage of variation in the financial, non-financial and overall organizational performance as accounted for by enterprise risk management. Scientific research in the subject area of strategic management advances that the adoption and implementation of proper strategic management practices such as ERM is essential for the achievement of organizational performance (Pfennigstorg, 1977).

To test this advancement, the study set the hypothesis, *H₀₁: ERM has no significant effect on performance of Kenyan State-Owned Corporations*. The first test therefore, sought to determine the effect of enterprise risk management on financial performance of Kenyan owned State Corporations. The research findings rejected the null hypothesis, thereby supporting that Enterprise risk management positively significantly influences the performance of Kenya owned state corporations. It was established that

enterprise risk management explained 6.9 percent of financial performance. The F ratio =6.409 and p- value of 0.013 indicating that the regression model was statistically significant. This p value was less than the 0.05 critical value and hence the model could explain the relationship between the Enterprise risk management and financial performance of state corporations in Kenya. The study findings supported and validated the propositions of the Contingency theory of Enterprise risk management in advancing the importance of Enterprise risk management in the achieving of set organizational goals, including profitability and financial goals.

The finding relating to, Enterprise risk management and financial performance of state corporations in Kenya was aligned to the finding by Yegon (2015) who noted that despite Enterprise risk management being a recent strategic management practice in financial organizations, Enterprise risk management significantly influenced financial organizational performance. The findings were also aligned to those of Bowman (1980) who established a positive correlation between risk management and return in regulated financial organizations. This could be ascribed to the government of Kenya's decisions to make Enterprise risk management a mandatory strategic management practice for all its state corporations in its efforts to reform the public sector (GoK, 2009).

Efforts to adopt this strategic risk management practice have been enhanced in the wake to the government revamping its efforts to achieve its reform programme, where the assuming of responsible fiscal stances, prudent resource utilization and prioritization of resource allocations has been given prominence. This finding supports advancement of the contingency theory of Enterprise risk management that this strategic management practice enables the organizations to responds to organizational risks that could

adversely affect the accomplishment of an organization's financial and strategic objectives.

The second test sought to establish the effect of enterprise risk management on non-financial performance of Kenyan owned State Corporations. The research findings supported this hypothesis. It was established that enterprise risk management explained 4.9 percent ($R^2=.049$) of non-financial performance. The F ratio of the model was 4.628 with a p-value of 0.034 suggesting that the regression model was significant. The p-value was below the critical p-value of 0.05 implying that the model had predictive power and could explain the relationship between ERM and non-financial performance variables.

The findings support the studies by PWC (2015) and Yegon (2015) which established that enterprise risk management influences non-financial performance in organization. The study further stated that Enterprise risk management is now considered a breakthrough in strategic management practice, with a high adoption rate in non-financial sector and governments as businesses, albeit being at nascent stages of its adoption. This could be ascribed to the fact that government agencies are gradually shifting from the long-standing unsustainable fragmented traditional response to risk approach.

Traditionally, governments tended to operate under the doctrine of government and therefore absorbed all their risks without devising any risk management strategies for the reason that, its agencies operated fully as carriers of public powers and duties (KIPPRA, 2009). This understanding made government agencies immune, self-sufficient and difficult to be wiped-out unlike the businesses in the private sector. It was at its realization of the dwindling economic performance over time, coupled with

decline in productivity and less funding, which imposed an increased social and economic burden on the government, that government sought to enhance governance among its institutions to spur its macro-economic growth (GoK, 2013).

According to the study by PWC (2012) the only aspects in government that were being somewhat safeguarded from risks, were sections related to public properties as these were governed by other financial laws. There was no special focus on other operational risks of government business. However, in the efforts to enforce the adoption of the economic recovery reforms in governments, Enterprise risk management practice is now gradually being integrated in a sustainable manner, in all aspects of government business decisions more-so in non-financial matters. This finding further agrees with the Contingency theory of ERM in its advancement that Enterprise risk management holistically addresses the full spectrum of organizational risks thereby supporting the achievement of not only financial but also non-financial organizational objectives.

To establish the influence of enterprise risk management on overall organizational performance, the study considered overall organizational performance comprising of non-financial and financial performance. The study results showed that enterprise risk management explained 6.5% percent ($R^2=0.065$) of organizational performance. The F ratio =5.945 with a p- value of 0.017 suggested that the regression model was significant. Moreover, the p-value was below 0.05 which implied that the model could explain the influence of enterprise risk management on organizational performance at 95 percent confidence interval. This position was aligned to that of Njoroge, Gakure, Waititu and Katuse (2013), who established that ERM and organizational performance is positive and significant.

The results further corroborated the postulation of the Contingency theory of ERM (Kaplan & Mike, 2014) on the importance of enterprise risk management in influencing organizational performance. In this study, enterprise risk management was conceptualized based on four ERM pillars; context setting, risk assessment, risk evaluation and communication. It is likely, that though the conceptualization of Enterprise risk management in this study did cut across the facets of strategic risk management practice, unlike counterpart organizations in the financial sector, owing to the Kenyan government's move to make Enterprise risk management a mandatory practice for its state corporations, the organizations have only adopted enterprise risk management as a recent strategic management practice and to varying extents.

The research findings show that despite the notable consensus on the positive influence of enterprise risk management on organizational performance, its adoption among the Kenyan state owned corporations, similar to other organizations in the non-financial sector is still at nascent stages (Rao, 2007) but gradually being integrated into government business and seen as starting to realize a positive impact on performance. The low R^2 of 6.5% could also be attributed to Herbane (2010) criticism of ERM that as a strategic management practice, ERM is fairly recent and cannot identify and address all organizational uncertainties.

The findings of this study are consistent with those of other similar studies but contradict the findings of some studies. For instance, studies by Gilley et al., (2002), Ojasalo (2009), Yegon (2015), Abdel-Azim and Abdelmoniem (2015) as well as Williams (2005), found that although enterprise risk management is a recently adopted practice in non-financial organizations, it had a positive statistically significant influence on organizational performance. Conversely, other researchers including Aaker and Jacobson (1987) and Belanes and Hachana (2009), advanced that due to

being at the nascent stages of adoption and at varying stages in various organizations, enterprise risk management is yet to significantly influencing performance. Additionally, others posited that due to the fragmented application of enterprise risk management it is difficult to assess its impact (Rao, 2007, McShane & Rustambekov, 2011 and Beasley et al., 2006).

Despite Enterprise risk management being at its nascent stages of adoption and integration in all aspects of government business, this study provided further evidence from the Kenyan owned state corporations, acknowledging ERM's influence on organizational performance. This is evident from the move to have all government agencies adopt enterprise risk management institutionalized through the recent reforms, with a view to enhance the state agencies performance, while steadily eroding the former government doctrine of immunity and non-accountability (GoK, 2009). It is noted that enterprise risk management improves the organizations' abilities to achieve the established non-financial, financial and overall goals. The findings that Enterprise risk management influences organizational performance therefore provided additional empirical evidence to buttress the Contingency theory of Enterprise risk management.

5.3 Enterprise risk management, Macro environment and Organizational performance

The second objective of the study was to determine the moderating effect of macro environment on the relationship between enterprise risk management and organizational performance. The study set out a second hypothesis, *H₀₂: Macro environment has no moderating influence on the relationship between ERM and performance of Kenyan State-Owned.* Macro environment components namely economic, environmental, technological, social, political and legal factors, were tested

for their effect on performance independently and collectively. Results of analysis established that macro environment did not have a significant moderating influence on the relationship between enterprise risk management and organizational performance. Hence the study failed to reject the null hypothesis.

Macro environment failed to significantly influence the relationship between enterprise risk management and organizational performance despite the overall model being statistically significant with a p- value of 0.018. Enterprise risk management accounted for 6.5 percent of variation in organizational performance, upon introduction of macro environment, the two variables accounted for 8.4 percent of the variation in organizational performance. The change upon the introduction of the interaction showed that R^2 only improved by 2.5 percent from $R^2=0.084$ to $R^2=0.109$. The overall model indicated that the interaction was statistically significant with p-value of 0.018, however, the Beta coefficient for interaction term was not significant with a p- value of 0.124. Since the calculated p-value for the interaction was greater than 0.05, it implies that there was no significance change on the relationship between enterprise risk management and organization performance due to the effect of macro environment, as moderation takes effect if the interaction term is significant.

The six conceptualized sub-variables of political, economic, social, technological, environmental/ecological and legal (PESTEL) macro-environment sub-variables as conceptualized by Pearce and Robins (2003) were examined. The findings showed that on introduction of macro environment (political environment), despite the overall model being statistically significant, ERM and macro environment (political environment) recorded a p-value of 0.858 therefore failing to significantly influence organization performance, neither did moderation take effect. Entrenched political persuasions influence decision-making in governments. The finding regarding the

statistical insignificance of the political factor would be attributed to the timing factor, considering that the study was undertaken at a time, when the country had just concluded the general elections, during this period, the Kenyan government was witnessing political consensus and synergy building within its political system.

The findings additionally showed that on introduction of macro environment (economic environment), the model was statistically significant. However, further analysis of the interaction term indicated that the interaction of ERM and macro environment (economic environment) insignificantly influenced organization performance, recording a p-value of 0.417, thereby the conclusion that moderation did not take effect. This could be attributed to the fact that unlike private entities that pursue profits, governments do not pursue profits but are focused on objectives inherent in democratic and political structures, where economy is a secondary objective. However this finding differed from the position of Deloach (2000) who established that economic factors influence the relationship between the adoption of Enterprise risk management and performance and that when organizations were exposed to economic crisis organization were seen to increasingly adopt enterprise risk management.

Technological factors are a key contributor to the dimensions that make up the external environment (Machuki & Aosa, 2011). The study did analyze macro environment (technological environment). The overall model of macro environment (technological environment) was significant. However, further analysis of the interaction term indicated that the interaction of ERM and macro environment (technological environment) insignificantly influenced organizational performance based on the recorded p-value of 0.421. The Beta coefficient for interaction term was not significant, thereby the conclusion that moderation did not take effect. This could be attributed to the slower pace in which government has gone about investing in technology,

integrating technology in all its operations and facilitating culture change to foster acceptance of the same which has been perceived to be less effective and less efficient than the implementation in the private sector. Additionally, the belief that technology in itself automatically transforms organization performance has proved otherwise in the public service, requiring state agencies to constantly review and update their strategic interventions beyond automation in order to attain organizational performance. Lenz (1980) established that technological factors significantly influences the organizations response as regards adoption of strategic management practices as a ERM and in turn positively influences performance.

Macro environment (social environment) was not significant. Further analysis of the interaction term indicated that, the interaction of ERM and macro environment (social environment) insignificantly influenced organization performance. The Beta coefficient for interaction term was not significant as it recorded a p-value of 0.519, thereby the conclusion that moderation did not take effect. Legal dimension of the external environment that is mainly characterized by the laws and regulations that affect the organization is considered a critical factor that must be given attention by the organization (Pearce & Robins, 2003). Macro environment (legal environment) was analyzed but despite the overall model being statistically significant, further analysis of the interaction term was not significant as it recorded a p-value of 0.89, thereby the conclusion that moderation did not take effect.

The results show that despite the overall models in all aspects of macro environment being statistically significant, political, economic, social, technological and legal factors were not statistically significant with regard to their effect on the relationship between enterprise risk management and organizational performance. The results of the analysis of the macro environment factors did not provide enough evidence to support

the moderating influence of macro environment between ERM and performance of Kenyan owned state corporations is significantly moderated by macro environment. The results supported findings by Machuki and Aosa (2011), who established that external environment did not have statistical significance on organizational performance. However, the results contradict those of Njoroge (2015) who while investigating the macro environment and performance relationship in Kenyan owned state corporations concluded the macro environment factors significantly influence performance. Other studies including Murgor (2014) and Kosure (2015) also found that external environment positively influences organizational performance.

Inclusion of the moderating variable Macro environment brought new insights to the relationship between Enterprise risk management and organizational performance. It was established from the findings, that while macro environment is considered conventionally and supported by Open systems theory (Burnes, 2004 and Ansoff & McDonell, 1990) and that organizations are dependent on occurrences within the external environment, Macro environment forces influences organizational strategic management practices including strategic risk management (Hammond et al., 2006). However, the study findings showed otherwise. Rumelt (1979) while discussing consensus between the strategy policy proponents and organizational environment perspective, noted that certain organization have dominance tendencies and therefore on the reverse, tend to set conditions of existence for others in the environment. Organizations in the public sector were seen to have for the longest time borne such dominance tendencies.

The analysis of respondent comments mainly on the issues of state corporation budget, could point to the possible reason on the failure of macro environment to moderate the relationship between Enterprise risk management and performance. Most state

corporations indicated that they are provided with budget from the government. This situation re-assures the state corporations continued operations, unlike their counterpart financial sector organizations, who must critically scan their external operating environment, design appropriate risk management strategies and follow through implementation for their survival. Kenyan owned state corporations, have continued to rely on exchequer funding for sustainability on the one hand, whilst on the other, the accountability mechanisms have been considerably lower (KIPPRA, 2009) and (PWC, 2015). Owing to this, the state corporations tend to be less stringent in the scanning of macro environment in the process of designing their organizational risk management strategies.

It is evident that there exists different levels of the effect of legal, economic, political, technological and social factors that characterize the operating environment of Kenyan owned state corporations (Njoroge, 2015), of which the reported variation of the association between enterprise risk management and organizational performance can somewhat be attributed to. The results of the statistically insignificant influence of macro environment on the relationship between ERM and organizational performance notwithstanding, organizations cannot ignore the Macro-environment determined effect. However, the results could be credible since most studies have not directly tested enterprise risk management-macro environment-performance relationship in the public sector.

5.4 Enterprise Risk Management, Top Management Demographics and Organizational Performance

The third objective of the study was to determine the moderating effect of top management demographics on the relationship between ERM and performance in

Kenyan State-Owned Corporations. The results of analysis showed that top management demographics had a moderating influence on the relationship between ERM and organizational performance

To test this, the study set the hypothesis, *H₀₃: Top management demographics has no significantly influences the relationship between enterprise risk management and organizational performance*. Top management demographic components namely age, gender, tenure, education and functional background, were tested for their effect on performance both independently and collectively. Results of analysis established that top management demographics collectively have a significant moderating influence on the relationship between enterprise risk management and organizational performance. Hence the study rejected the null hypothesis. Enterprise risk management accounted for 6.8 percent of variation in organizational performance, upon introduction of top management demographics. The Beta coefficient of ERM was significant with p-value =0.004, while beta coefficient of Top management was in significant with p-value =0.064 respectively. Upon interaction R² improved by 3.5 from 0.068 to 0.103. The Beta coefficient for interaction term was significant with a p- value of 0.048. Since the p-value for the interaction was below 0.05, it implied that the moderation effect of top management demographics on the relationship between enterprise risk management and performance in Kenyan State-Owned Corporations was statistically significant.

The study proceeded to tests the five top management demographic sub-variables as conceptualized by (Nielson & Nielson, 2013) and (Marimuthu & Kolandaisamy, 2009). Upon analyzing interaction between ERM and age, R² improved by 6.6 percent from 0.106 to 0.172. Age had a statistically significant effect on financial performance but the effect on non-financial performance was statistically not significant. This finding was aligned to that those of Mwangi (2018) and Dutton and Duncan (1987) who

postulated that, the presence of younger managers in Top management led to volatile performance. Overall, it was established that age had a significant moderating influence on the relationship between enterprise risk management and organizational performance, though the influence of age on the relationship between ERM and organizational performance was negative. The findings are consistent with those of Child (1972) who found that older managers tend to be conservative and have lesser propensity to matters relating to risk management. It was observed that top management teams within the Kenyan owned state corporations, are mainly characterized by older individuals.

Further analysis of enterprise risk management and functional background revealed that the two variables accounted for 11.9 percent of variation in organizational performance. The overall model was statistically significant. Functional background had no statistically significant effect on all the performance measures, implying that there was not enough evidence to support the moderation influence of top management demographics (functional background) on the relationship between enterprise risk management and organizational performance. Thus skills and experience associated with functional background did not impact organizational performance. This finding contradicted that by Certo et al (2006) who established that functional background had a positive effect on performance. The difference in findings could be attributed to contextual differences.

Additionally, Enterprise risk management and education accounted for 11.9 percent of variation in organizational performance, with the overall model being statistically significant however, top management demographics (education) had no significant effect on all aspects of performance. This implied that there was not enough evidence to support the moderation influence of top management demographics (education) on

the relationship between enterprise risk management and organizational performance. This finding was consistent with that of Mkalama (2014) who found that education had no statistically significant effect on performance. The finding was also consistent with those of Wiersema and Bantel (1992) who advanced that managers more often than not chosen from different streams based on their personalities, interest and cognitive abilities. This implied that the more Top management team are characterized by manager with different education levels and qualifications, the more performance declines. However, Katz (1982) advanced different finding regarding this relationship and posited a positive influence of education on the relationship between adoption of strategies such as Enterprise risk management and performance.

Enterprise risk management and tenure accounted for 11.7 percent of variation in organizational performance, with the overall model being statistically significant. Tenure had a statistically significant effect on overall performance. However, its effect on financial and non-financial performance was statistically not significant. The findings relating to tenure and, financial and nonperformance, were consistent with those of Hambrick and Mason (1984) who advanced that longer tenure by itself validates the correctness of previous decisions made by top manager who have served for long and have psychological investment in their respective organizations. This make such managers averse to the adoption of emerging strategic management practices such as strategic risk management. Most top executives in Kenyan owned state corporations have served the government for a considerable length of time, some of them having served the same sector for their entire working life. This finding however, contradict that by Certo et al (2006) who found positive relationship between tenure and financial performance. This could be attributed to contextual and

methodological differences, since this study adopted a cross sectional survey design, while the study by Certo et al (2006) was a meta-analysis.

Gender had no statistically significant influence on all the measures of performance, implying that there was not enough evidence to support the moderation influence of top management demographics (gender) on the relationship between enterprise risk management and organizational performance. This was consistent with the findings of Mkalama (2014), Mwangi (2018) and Marimuthu and Kolandaisamy (2009) who all established that gender did not affect performance in a statistically significant manner. The finding however contradicted that of Dezso and Ross (2012), who found that gender disparity in the Top management team improved firm's financial performance. This difference could be attributed to methodological and contextual differences. The study was carried out in USA public companies and adopted the longitudinal research design, whereas the current study adopted the cross-sectional design focusing on Kenyan owned state corporations.

The statistically significant results of the overall influence of top management demographics on the relationship between ERM and organizational performance are an indication that, organizations cannot overlook the established effect of top management demographics on strategic risk management and its influence of organizational performance.

The study findings are in line with findings of some studies such as Aaker and Jacobson (1987), Mkalama (2014) and Mwangi (2018) who in line with the advancement of the upper echelons' theory (Hambrick & Mason, 1984), supported the view that top management teams are responsible to organizational decisions that influence the organizations' selection of strategic management practices, therefore determine the

adoption of practices such as Enterprise risk management which influences performance. The findings were also aligned to those of Dabari and Saidini (2014) who while looking at the moderating influence of top management demographics on the relationship between enterprise risk management and performance in the banking sector established that top management demographics significantly moderate that relationship.

Separately, the study finding contradicted other findings such as those by Muchemi (2013) and Ondari (2015) who established that top management demographics did not significant moderate the relationship between adoption of organizational strategies and organizational performance. The findings further contradicted those of Arnaboldi and Lapsley (2014), who established that Top management had not significant influence on the relationship between risk management and performance and further stated that, the varying influence could be attributed to the positioning of enterprise risk management in the organization, coupled with the lack of clarity on top management ownership of the risk management practice. Other studies have posited inconclusive findings and neither supported nor failed to support the moderating influence of top management demographics. Such studies included, Belanes and Hachana (2009), who stated that, top management's influence on the relationship between enterprise risk management and organizational performance is to varying extent and depends on other factors and those of PWC (2004) which advanced that top management in the public sector were still viewing enterprise risk management as an peripheral accountability mechanism that does not influence on their operations and performance thus the variability in their involvement.

Top management demographics had a significant moderating effect on the relationship between Enterprise risk management and the performance of Kenyan owned state

corporations. It was established from the findings that as it is advanced by the Upper echelons' theory (Hambrick & Mason, 1984) that Top management demographics influences organizational strategic management practices including Enterprise risk management (MC Whorter et al., 2006) the study findings validated this proposition. It was however seen in the analysis of comments, that despite the importance of Top management teams influence in the adoption of ERM, the gradual and rather slow pace of adoption of ERM can be attributed to the Top management team demographics.

The enforcement of the adoption of Enterprise risk management by Top management and implementation of this practice in Kenyan owned state corporations, is currently being reinforced by more stringent checks, additional follow-through modalities and the requirement for more accountability on the actions of Top management as it relates to the adoption of Enterprise risk management. Top management have the responsibility of developing and implementing organizational strategies to safe guard the interests of the organization from eminent risks posed by the macro environment and therefore, ought not to exist outside the sustainable adoption and effective implementation of Enterprise risk management strategy to ensure the achievement of set organizational goals. The linkage and synergy between Enterprise risk management and Top management demographics is therefore essential.

5.5 Enterprise Risk Management, Macro Environment, Top Management Demographics, and Organizational Performance

The fourth objective was to establish the Joint Effect of Enterprise Risk Management, Top Management Demographics and Macro Environment on the Performance in Kenyan State Owned Corporations. To achieve this objective, this study set a corresponding hypothesis, *H₀₄: Enterprise risk management, Macro environment*

and Top management demographics have no significant influence on the performance in Kenyan State Owned Corporations

The study established that Enterprise risk management, Top management demographics and Macro environment had a statistically significant joint effect on organizational performance. The joint effect was positive and significant giving an $R^2=0.208$, $F=3.406$ and $P\text{-Value}=0.027<0.05$, as compared to the individual effect of ERM on organizational performance which gave $R^2=0.065$. The results confirmed that the joint effect of enterprise risk management, top management demographics and macro environment when regressed on organizational performance was positive and significant. The hypothesis that Enterprise risk management, macro environment and top management demographic jointly have significant influence on organizational performance was supported.

These findings revealed that organizational performance is an outcome of relationships arising from several different factors. Enterprise risk management, macro environment, top management demographics jointly exhibited higher organizational performance. The results are consistent with the findings of Murgor (2014) that established the importance of external environment on performance, Cannella, Park and Lee (2008) on the importance of top management, macro environment and performance and Belanes and Hachana (2009) on managerial risk-taking as a critical factor for higher organizational performance. The findings are also in tandem with the findings by Mwangi (2018) that Top management teams has a significant effect on financial and non-financial performance, Mkalama (2014) that the combined effect of the Top management demographics has a statistically significant influence on organizational performance in Kenyan owned state corporations and Culp (2002), that top management upon considerations of the various macro environmental forces supports

enterprise risk management to influence organizational performance. Finally, this position is in line with the postulation of Aaker and Jacobson (1987) who established that an effective enterprise risk management strategy is a product of the full involvement of top management team in its formulation, upon adequately scanning the macro environment to inform the risk management strategy with a view to minimizing risks and maximizing on opportunities in order to enhance organizational performance.

Overall, the study reported mixed results with hypotheses 1, 3 and 4 exhibiting statistical significance whereas hypothesis 2 showed statistically not significant results. The results could stand on their own merit because of the evident recent introduction and gradual adoption of enterprise risk management as a strategic management practice in Kenyan state-owned corporations, not many studies have tested the effects of top management and macro environment on the enterprise risk management-performance relationship.

5.6 Chapter Summary

Chapter five presented a discussion of the findings made by this study. The chapter was set out in line with each study objective. The hypothesis relating to the objective of interest was first outlined before a description of how the hypothesis was tested provided. The conclusions arrived from testing the hypothesis were highlighted subsequently and discussed in line with existing literature. Conclusions were thereafter compared to theoretical expectations and empirical studies with the comparisons and contrasts provided.

Influence of Enterprise risk management on performance in Kenyan State-Owned Corporations was considered. The study concluded that Enterprise risk management significantly influenced organizational performance, which was consistent with the

Contingency theory of Enterprise risk management and some previous studies. Subsequently, the study considered macro environment and Top management demographics as moderator to this relationship and concluded that Macro environment was not a significant moderator as advanced by the Open-systems theory however Top management demographics was found to be a significant moderator as established in the Upper-echelons theory. Finally, the study concluded that Enterprise risk management, Top management demographics and Macro environment had a statistically positive significant joint effect on organizational performance.

The next chapter presents a summary of the findings, conclusions and recommendations. The chapter begins with a summary of the findings from chapter four including findings from the descriptive statistics and the hypotheses testing. Conclusions are then made against each hypothesis along with the related discussions. Implications are drawn from the findings are then set out before the limitations of the study are outlined. Finally, suggestions for further research are provided.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The summary of the study findings, conclusions and recommendations are presented in this chapter. The chapter begins with the summary of the findings that were presented in chapters four and five. The conclusions made from the results are then set out before the limitations are presented. The chapter then details the recommendations made by the study and the implications of the findings to theory, policy and practice. Finally, suggestions for further research are outlined.

6.2 Summary of Findings

This study aimed at establishing the influence between enterprise risk management, macro environment and top management demographics and the performance of Kenyan state-owned corporations. To achieve this objective, primary data was collected from 92 state owned corporations. The relationship was conceptualized and schematized in a conceptual framework. Data was collected using a semi-structured questionnaire on the concepts to test these relationships. The data was later cleaned, sorted, edited, analyzed and presented. Preliminary tests to determine viability were first carried out together with descriptive statistics. The descriptive statistics included means, standard deviation, frequencies and coefficient of variations. Inferential statistics such as factor analysis, Pearson's correlation, multiple and hierarchical regression were later conducted. The results revealed that hypotheses 1, 3 and 4 were accepted. However, a hypothesis 2 was not accepted. Inferential statistics were used to test the relevant hypotheses and the findings are detailed in chapters four and five. The key findings of this study were set out in this section.

The overall objective of this study was captured through four specific objectives and corresponding hypothesis. The first objective was achieved by setting the hypothesis that, Enterprise risk management has no significant effect on the performance of Kenyan owned state corporations. The Enterprise risk management sub-variables were jointly tested to establish the influence on financial, non-financial and overall organizational performance. ERM explained 6.9% of the variation in financial performance, 4.9% in non-financial performance and 6.5% variation in organizational performance. The findings revealed that on the overall, Enterprise risk management had a positive influence on financial, non-financial and overall organizational performance. The study therefore supported the hypothesis that, Enterprise risk management has a significant effect on the performance of Kenyan owned state corporations.

The second objective of this study was captured by the hypothesis that, the macro environment has no significant relationship between Enterprise risk management and performance of Kenyan owned state corporations. This hypothesis was tested in three steps corresponding to the Baron and Kenny (1986) model for testing mediation. In the first step, ERM was demonstrated to have a significant effect on organizational performance. In the second step, it was established that ERM and Macro environment components combined had a significant negative effect on organizational performance and it accounted for 8.4% variation of organizational performance. In the third step, upon the introduction of the interaction term, it was established that Macro environment did not moderate the relationship between Enterprise risk management and organizational performance. The study therefore failed to reject the hypothesis that macro environment has no significant relationship between Enterprise risk management and performance of Kenyan owned state corporations.

The third objective was expressed through the hypothesis that the top management demographics has no significant relationship between Enterprise risk management and performance of Kenyan owned state corporations. This hypothesis was also tested in three steps corresponding to the Baron and Kenny (1986) model for testing mediation. In the first step, ERM was demonstrated to have a significant effect on organizational performance. The second step established that Top management age and Top management tenure significantly moderated the relationship between ERM and organizational performance, whereas, Top management education, Top management functional background and Top management gender did not significantly moderated the relationship between ERM and organizational performance. The Top management demographics were then composited to test the overall effect on the relationship between ERM and organizational performance. The finding revealed that on the overall, Top management demographics significantly moderated the relationship between Enterprise risk management and organizational performance. The study therefore supported the hypothesis that the relationship between Enterprise risk management and performance of Kenyan owned state corporations is significantly moderated by Top management demographics.

Finally, the joint effect of Enterprise risk management, Macro environment, Top management demographics was captured through the hypothesis that, Enterprise risk management, Macro environment and Top management demographics jointly significantly influence performance in Kenyan State Owned Corporations. The findings revealed that Enterprise risk management, Macro environment and Top management demographics jointly significantly influence organization performance. The study therefore supported the hypotheses that Enterprise risk management, Top

management demographics and Macro environment jointly significantly influence the performance in Kenyan State Owned Corporations.

6.3 Conclusion

This study set out to establish the influence of Enterprise risk management, macro environment and Top management demographics and the performance of Kenyan state owned corporations. Four specific objectives and hypotheses were laid out to achieve the main objective of the study. The hypotheses were tested before conclusions were made arising from the findings.

The study showed that Enterprise risk management had a significant influence on organizational performance. In view of the posited position of the Contingency theory of Enterprise risk management that matching Enterprise risk management and contingent factors of a firm results in achieving desired outcomes. Further, in line with the advancement that effective management of organization-wide risks depends on organizational specific circumstances and context in which the organization operates and effective consideration of these factors and effective matching of this to enterprise risk management influences organizational performance. This study concluded that Enterprise risk management significantly influenced organizational performance thus supporting the Contingency theory of Enterprise risk management.

The study further established that Macro environment did not significantly influence the relationship between Enterprise risk management and organizational performance. Proponents of the Open Systems theory advance that organizations are environment serving and dependent. That environment consists of forces that are political, economic, sociological and technological in nature which firms do not have control over. This study tested this proposition and concluded that Macro environment did not influence

the relationship between ERM and performance of Kenyan state owned corporations. The statistically not significant results could be attributed to the positioning of Enterprise risk management in the public service as a fairly recent strategic management practice, coupled with the operating model of state corporation where focus is on the fulfillment of a constitutional or prescribed mandate thus assurances of ex-chequer funding as opposed to focus on profitability or bottom-line.

The study further revealed that Top management demographics did significantly influence the relationship between Enterprise risk management and organizational performance. In investigating this relationship, the study considered age, gender, tenure, education and functional background. The sub-variables collectively positively influenced the relationship between Enterprise risk management and organizational performance, thus supporting the Upper echelons proposition, that characteristics of senior managers affected the givens they bring to organizational decision situation when dealing with strategic decisions thus influencing performance.

The study further established that Enterprise risk management, Macro environment, Top management demographics jointly influence the performance of Kenyan owned state corporations.

Finally, the study's conceptual model was tested and in view of the not supported moderation influence of macro environment on the relationship between Enterprise risk management and performance of Kenya owned state corporations, the original conceptual framework was varied. The study's empirical conceptual model post-analysis is as shown in Figure 6.1.

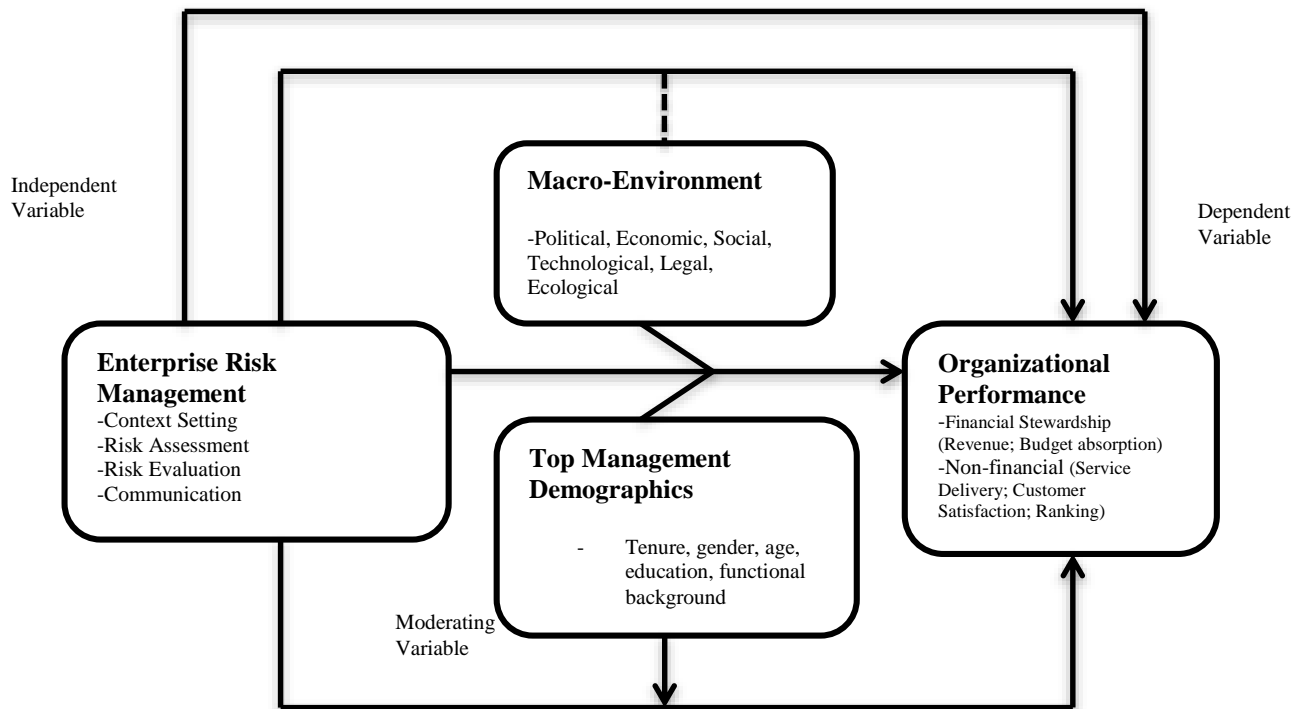


Figure 6.1:
Empirical Conceptual Model

Source: Author (2019)

The study served to validate the following objectives of this study that, Enterprise risk management significantly influences performance, top management demographics significantly moderates the relationship between Enterprise risk management and performance and Enterprise risk management, macro environment and top management demographics jointly significantly influence the performance of Kenyan owned state corporations.

6.4 Implications of the Study

This study focused on Enterprise risk management and its influence on organizational performance and was conducted among Kenyan owned state corporations. This was against a backdrop of mixed findings by other strategic management researchers

including Machuki and Aosa (2011), Mkalama (2014) and Odundo (2012), who conceptualized different variables applied to this study and showed varying explanatory models. Scholars have recommended the need to research on more variables that may impact on performance in a significant way. Additionally, conceptual literature regarding enterprise risk management as a strategic management practice has received limited attention even in empirical studies. This study, despite reporting varying degrees of relationships amongst the variables analyzed, showed evidence that established statistical significance for the overall model. The study is therefore poised to provide the following theoretical, policy and practical implications and recommendations.

6.4.1 Theoretical Implications

The study adopted a positivist approach as this philosophy commences with theory then data is collated to either accept or disprove the theory. This study was grounded in the Contingency theory of Enterprise risk management (Kaplan & Mike, 2014), Open systems theory (Burnes, 2004), Upper echelons' theory (Hambrick & Mason, 1984) and Stakeholders theory (Freeman, 1984). Data was collected to provide empirical evidence aligned to these theories.

The study operationalized Enterprise risk management along four constructs of context setting, risk assessment, risk evaluation and communication. Proponents of Contingency theory of Enterprise risk management (Kaplan & Mike 2014) posits that there ought to be a 'fit' between the organizational risk type, enterprise risk management strategy and the organizational desired outcomes, therefore only firms with effective combination of these factors will experience enhanced performance and therefore survive. It was established that on the overall, Enterprise risk management

had a statistically significant influence on the overall organizational performance. The theory therefore received a boost from the findings of this study as established in the Kenyan state-owned corporations context. This evolving theory has been supported, by validating its postulation regarding the *fit* between enterprise risk management and organizational outcomes in Kenyan state-owned corporations context, which are non-financial in nature. The study recommended that future empirical studies can further augment the Contingency theory of Enterprise risk management, by investigating Enterprise risk management's association with other organizational variable and its effect on performance to further build on this evolving theory. Studies can also consider investigating variables adopted in this study but adopting different research designs such as longitudinal research design or other research forms that can explain the causal effect of the association between the variables.

The Open systems theory's advances mainly that firms conduct their business amidst the influences, occurrences and changes that are span by the external environment. However, the findings analyzed indicated that macro environment did not have a statistically significant moderating influence on the relationship between enterprise risk management and organizational performance. The analyzed outcome of the study offered insight on the influence of the macro environment in view of the significant positive joint influence of enterprise risk management, macro environment and organizational performance on organizational performance. The theory therefore receives a boost from the appreciation that macro environment combined with enterprise risk management as a strategic management practices could have a higher influence on performance. The study recommended that future Open systems scholars would benefit in future considering the Open system theory alongside the Contingency theory of enterprise risk management theory to improve on the assessment of

uncertainties and threats span by the environment to the organizations which come in the form of risks.

The Upper echelons theory holds that Top management demographics can predict the strategies adopted by the organization (Hambrick & Mason, 1984). It is on the strength of the advancements of this theory that the hypothesized relationship of top management demographics influencing enterprise risk management and performance of the state corporations anchored. Additionally, Hambrick (2007) established the need for future research to explore the process by which Top management affected performance. This study therefore sought and established that though some of the Top management demographics did not have a significant influence on performance, the combined effect of Top management demographics had a statistically significant influence on organizational performance. This finding regarding the stronger influence of combined Top management demographic, which was different from the individual demographic influence rendered empirical strength to the Upper echelon theory. The theory received a further boost by way of validating its postulation in the context of Kenyan owned state corporations. The more significant implication of the study to this theory was upholding the phenomenon that the organization is a reflection of its top management, characterized by their respective demographics, noting the significant positive influence of tenure on the relationship between enterprise risk management and organizational performance and the significant negative influence of age on that relationship.

The Stakeholders theory holds that organizational performance is a function of how well an organization meets its goals to satisfy the interests of its stakeholders (Radner & Shepp, 1996). In line with this theory there has been a shift from the focus on profits, thus putting more pressure on Top management to consider and include other non-

financial measures of organizational performance, through application of various management strategies while taking cognizance of organizational context, in order to satisfy the needs of the diverse stakeholders. The study established that on the overall the joint effect of Enterprise risk management, Top management demographics and Macro-environment had a statistically significant influence on organizational performance, which was greater than the individual influence of the variables on performance. This study provided empirical evidence that Stakeholders' theory if applied together with Contingency theory of Enterprise risk management in understanding strategic risks, Upper echelons theory in understanding the actions of top managers in implementing organizational strategies as internal stakeholders and Open systems theory in evaluating the influences of the external environment and stakeholders, would positively influence organizational performance. The study recommended that the Stakeholders' theory would be improved to include the risk management component in analyzing each stakeholder to enhance the value creation for the different stakeholders and in effect improve overall organizational performance.

6.4.2 Implications on Policy

Kenya state owned corporations are established and governed through various laws and policy frameworks. The central government through its various ministries is responsible for the formulation of the relevant policy frameworks and oversee the implementation.

Kenya's Constitution of 2010, the various government Acts establish the state corporations and National government regulations and guidelines are largely geared towards enforcing improved performance in the public service. Overtime, the government's focus has been geared towards the improvement of service delivery,

prudent utilization of resources and wealth creation for sustainability. The various policy frameworks are continually being reviewed to support the country's development agenda. Kenyan public sector has undergone several phases of reforms to position itself to deliver on the country's economic blue-print, the Vision 2030-Kenya's strategic plan, alongside the current country's leadership 'Big Four' agenda. One key outcome of these reforms was the development of a governance code, popularly referred to as "Mwongozo Code of Governance". This Code introduced enterprise risk management as a strategic management practice in all Kenyan owned state corporation. Since the year 2015, 'Mwongozo' further made the implementation of enterprise risk management a mandatory practice in all state corporations with the objective of enhancing the implementation and delivery of government development programmes, projects and the general governance and performance of state corporations. Pursuant to the introduction of enterprise risk management in state corporations, several initiatives by government have ensued to interrogate the effectiveness of this Code and the recommended strategies there-in, the latest initiative in 2019 being the formulation of a Mwongozo Guidelines Sub-committee under the National Development Implementation Technical Committee (NDITC) to assess the operationalization of the Mwongozo Code of Conduct in State Corporations including the effectiveness of enterprise risk management as a strategic management practice.

As the reform interventions to promote efficiency and effectiveness of Kenyan owned state corporations continue, the findings of this study with regard to the established positive and significant influence of the joint effect of enterprise risk management, macro environment and top management demographics on the overall performance of Kenyan owned state corporations are very timely to support the ongoing policy review and formulation. The key contributions arising from the findings to policy, which can

promote the enforcement of the provisions of 'Mwongozo Code of Governance' with regard to the implementation of enterprise risk management include; the proposal for the enactment of enterprise risk management guidelines to make it a statutory law with the inclusion of the mainstreaming of macro environment impact assessment as an intervention in the formulation of organizational enterprise risk management strategy, integrating enterprise risk management with organizational strategic management and corporate performance activities. Additionally, the enforcement of the oversight responsibility for enterprise risk management by the top management team as individual risk owners of their respective functions and resources dedicated to enforce the implementation, monitoring and mandatory reporting of implementation to central government.

Finally, in view of the importance of enterprise risk management in the achievement of state corporations objectives, intended for the delivery of national government development programmes and projects, these proposed interventions should be regulated and monitored to measure impact on state corporation performance through stringent audits of implementation of enterprise risk management and follow-through reporting mechanisms to the central government as is the current practice in the area of financial auditing and reporting and quality management systems.

6.4.3 Implications on Practice

Improvement of managerial practices has been a long-standing desire within the context of Kenyan state corporations, thus basis of the numerous government reforms programmes. State corporations have been seeking best ways to enhance their performance and contribute to the national agenda. This study poses several implications to managerial practice more-so in the Kenyan owned state corporations

and the non-financial sector in general. First, the study established that enterprise risk management has a positive influence on overall organizational performance. This suggests that organizational decision-making process ought to be anchored on and supported by integrating Enterprise risk management with organizational strategic management activities to mitigate on uncertainties and enhance the realization of performance goals. Managers would need to ensure the adoption of strong risk intelligent culture by all and the integration of risk management at all levels of decisions making in the organization.

Secondly, managers needed to coalesce in making strategic decisions that enhance organizational performance. This study noted the combined influence of top management demographics including education, age, functional background, gender and tenure had a higher statistical significance than their individual significance. The findings also revealed a positive significant influence on tenure on the relationship between Enterprise risk management and performance and the negative significant influence of age on this relationship. Therefore, through the findings of this study individuals in charge of the recruitment of top managers will ensure that recruitment policy in place, facilitate for the sourcing of senior management teams that are balanced in terms of demographics in order to leverage on their diverse contributions and viewpoints. Top managers would also need to acknowledge the importance of their differences in the process of decision making and their collective responsibility in developing and implementing organizational strategies to safe guard the interests of the organization from eminent risks most of which span from the elements of the macro environment, which cannot be ignored, in view of the established significant joint effect of Enterprise risk management, macro environment and top management demographics on organizational performance.

Finally, this study noted the significant positive joint effect of enterprise risk management, macro environment and top management demographics on the overall organizational performance. Arising from this position, it was imperative for organizations to acknowledge and explore the pertinence of synergizing these three components to attain enhanced organizational performance. Owing to the established positive and significant influence of this joint effect, it is recommended that organizations top management ought to be more deliberate in the adoption of strategic risk management, whose effective operationalization ought to take cognizance of responses from the macro environment among others, in order to effectively satisfy the expectations of both the internal and external stakeholders. Owing to the core nature of Enterprise risk management, which is about managing of uncertainties to enhance the achievement of set organizational objectives as opposed to being a ‘self-fulfilling’ stand-alone practice. This study recommends that Kenyan owned state corporations should integrate Enterprise risk management, organizational strategic management and corporate performance activities. This would enhance the achievement of organizational performance and meet the diverse stakeholder expectations.

6.5.1 Limitations of the Study

The study, like any other, faced several limitations. In the process of establishing the main objectives of the study, conceptual, contextual and methodological limitations were faced. However, the study was able to overcome the challenges and report meaningful results. Conceptually, there was a limitation of literature on previous research undertaken to study the influence of enterprise risk management on the organizational performance in non-financial sector. McShane and Rustambekov (2011) also confirmed position. There was also minimal literature on the influence of macro environment on enterprise risk management and performance. A challenge

therefore presented, as to the extent to which the researcher could compare the findings of this study with previous research.

The study variables used to explain performance in state corporations were enterprise risk management, top management demographics and macro environment. However, these three variables do not entirely consist of factors that affect performance in state corporations. Literature holds that organizational performance could also be influenced by other factors including strategic decision-making, corporate governance, organizational structure, resource allocation and ownership. All these factors were not considered in this study.

Contextually, the study was carried out among Kenyan owned state corporations. State corporations ordinarily operate in very different internal and external environment from other organizations either in financial or non-financial private sector. The results therefore, are to be applied cautiously since they may not be easily generalized to other sectors like the manufacturing and banking sectors, among others. This is because organizations in the private sector operate differently.

This study experienced methodological limitations by applying a descriptive cross-sectional survey design, which involves collecting data about the study objects at a singular point in time. This study acknowledged that if a longitudinal design would have been applied, the results of the study could possibly have been different, given that the effects of the variables may take long to fully materialize. A longitudinal study was not feasible given the hesitance of organizations to be subject of academic study. To mitigate this limitation, the study adopted longer time frames for measurement of organizational performance.

The primary data collected for this study was collected through a self reporting questionnaire. The study therefore relied on the respondent's provided information. This method has been established to provide validity challenges in some contexts. This could have been compounded by another limitation of the identity of the target researcher who happened to be either the Chief Executive Officer of the state corporation or his designated representative who should have been the Head of Risk Management function, Strategy or Human Resource functions. Conflict of interest issues could arise and lead to biases in reporting. To mitigate this, the researcher expressly gave a disclaimer and commitment in the introductory letter that the information provided shall only be used for academic research purposes and provided the option to the respondent to indicate whether they would wish to obtain a copy of the findings of the study.

The study had another limitation emanating from the long-standing restructuring programme affecting state corporations, which has since seen some roles transferred to other government agencies, other state corporations merged and other national functions devolved to County governments. In view of this, the study opted for proportionate stratified sampling to obtain a representative sample for the state corporations. The state corporations not included in the study may have left out vital perspectives and contributions to this study. However, those that remained were representative enough of the entire population and were well spread across the sectors. This implied that the research design was not compromised.

Finally, most of the state corporations are geographical spread across the country, a situation that made access to those locations difficult and called for more time to drop and pick the questionnaires. To overcome this limitation, the researcher engaged knowledgeable research to expedite data collection and enhance the response rate.

Additional resources had to be dedicated for accommodation and travel expenses for the research assistants to undertake the task of administering, follow-up and picking the questionnaires, since most respondents preferred hand-delivered and collected hard copy questionnaires. In spite of the mentioned limitations, these did not affect the generalizability of the findings to the state corporations neither did it affect the study's authenticity and robustness.

6.6 Suggestion for Further Research

This study focused on the effect of macro environment and top management demographics on the relationship between enterprise risk management and organizational performance. The study aroused issues that would require further research.

First, the study relied on information collected through self reporting by respondents in the target organizations. Future research could consider secondary sources of data that would be more objective and verifiable, especially on indicators of enterprise risk management and organizational performance. Another suggestion would be to use both interviews and questionnaires in a triangulation approach to enrich the study methodology. Additionally, future research can focus, albeit being costly and time-consuming, on longitudinal approaches as such empirical approach is more likely to provide additional insights into the dynamic aspects of enterprise risk management and organizational performance.

Further, the study largely employed correlation and regression analysis in testing the various hypotheses that were designed to test the relationships and moderating effects of the study. These analysis models were applied with the assumption that the relationships amongst the study variables were linear. However, using non-linear

models to assess the relationships could produce dissimilar results. Therefore, further research is suggested to explore whether non-linear models could better explain the relationships than the linear models used in this study.

Secondly, future research could consider disaggregation of the context. The current study was conducted across all Kenyan owned state corporations. Similar variables can be observed within functional categorization of the state corporations including regulatory, commercial and non-commercial and the results compared. Future studies can also be replicated to the other segments of the public service such as central government ministries, departments and county governments all of which are working in synergy to deliver on the government's development agenda. Meanwhile, considering that enterprise risk management is an evolving strategic management practice in the developing world, it would be informative to repeat a similar study within the private sector context such as manufacturing firms and small and medium enterprises.

Finally, this study conceptualized macro environment and top management demographics as moderating variables, enterprise risk management as the independent variable and organizational performance as the dependent variable. The findings showed that the joint influence of the variables had significant influence on performance. However, the conceptualization did not fully explain enterprise risk management, which is fairly a recent strategic management practice in the developing world. Therefore, future research may possibly explore the implementation aspects of enterprise risk management across organizations. Forthcoming research may also consider introducing new variables to this study conceptualization such as the wider internal and external environment factors, strategy implementation and corporate governance among others. Additionally macro environment and top management

demographics played a moderating role in this study. The future research could consider the two variables independent influence on performance of Kenyan state corporations as this was not within the scope of this study. Further, the influence of enterprise risk management as a moderating variable on the relationship between macro environment and organizational performance or top management demographics and organizational performance could also be considered. These interactions can likewise be areas of future research.

6.7 Chapter Summary

This was the final chapter of this thesis. The chapter began by providing the findings of this study. A summary of the descriptive findings was outlined followed by those of each hypothesis and the inferences made. On the overall the study concluded that enterprise risk management, macro environment and top management demographics jointly influenced organizational performance. Additionally, top management demographics significantly influenced the relationship between enterprise risk management and organizational performance whereas it was established that macro environment did not significantly influence the relationship between enterprise risk management and organizational performance.

Subsequently, the conclusions from the study were outlined in line with each objective. The implications and recommendations on theory, policy and practice of the study were thereafter provided. On the overall, this study noted theory wise, the need to further augment the Contingency theory of Enterprise risk management based on the fact that enterprise risk management is gradually being adopted in the non-financial sector as a fairly recent but critical strategic management practice. Organizations also needed to consider the power vested in top management whose strategic decision making powers

are a reflection of the organization. A major implication on policy was the proposal for the enactment of the government guidelines on enterprise risk management and clearly designated the top management team as responsible for risk management responsible for enforcing the implementation, monitoring and reporting on organizational strategic risk management initiatives. Finally, the implication to practice was the need to integrate Enterprise risk management and strategic management practice in view of its confirmed significance positive influence on performance.

The chapter then set out the conceptual, contextual and methodological limitations that were faced in this study and finally closed by proposing the suggested areas that can be considered for future research.

REFERENCES

Aaker, D., & Jacobson, R. (1987). The role of risk in explaining difference in profitability. *Academy of Management Journal*, 30(2), 227-296.

- Abdel-Azim, M.H., & Abdelmoniem, Z. (2015). Risk Management and Disclosure and their impact on firm value: The case of Egypt. *International Journal of Business, Accounting and Finance*, 9(1).
- Adams, W.G., & Campbell, M. (2005). Where are you on the journey to ERM?. *Risk Management Journal*, 52(9), 16-19.
- Ansoff, H.I., & McDonnell, E.J. (1990). *Implanting Strategic Management (2nd ed.)*. NY: Prentice Hall.
- Arnaboldi, M., & Lapsley, I. (2014). Enterprise-Wide risk management and organizational fit: A Comparative Study *Journal of Organizational Effectiveness: People and Performance*, 1(4), 365-377.
- Awino, Z.B. (2013). An empirical study of top management team diversity and performance in the service industry. *Research Journal in Organizational Psychology & Studies*, 2(1), 25-31.
- Babbie, E. R. (2004). *The practice of social research*. Belmont, CA: Thomson/Wadsworth.
- Baron, R. M. & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic and Statistical Considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Bartholomew, D.J., Knotts, M., & Moustaki, I. (2011). *Latent variable models and factor analysis: A unified approach*. (3rd Ed.). West Sussex, UK, John Wiley & Sons.
- Beasley, M.S, Clune R., & Hermanson, et al. (2005). Enterprise risk management: an empirical analysis of factors associated with the extent of implementation. *Journal of Accounting and Public Policy*, 24(6), 521-531.
- Beasley, M., Chen, A., Nunez, K., & Wright, L. (2006). Working hand in hand: balanced scorecards and ERM. *Strategic Finance*, 89(9), 49-56.

- Belanes, A., & Hachana, R. (2009). An operationalization of managerial risk-taking and its performance implication in the Tunisian context. *Journal of Emerging Market Finance*, 8(4), 289-314.
- Bertalanffy, L. (1968). *General Systems Theory: Foundations, Development, Applications*. New York, George Braziller.
- Bowman, E.H. (1980). A risk/return paradox for strategic management. *Sloan Management Review*, Spring, 1980.
- Brustbauer, J. (2014). Enterprise risk management in SMEs: Towards a structural model. *International Small Business Journal*, 1-16
- Burnes, B. (2004). *Managing Change: A Strategic approach to firm's dynamics*. 4th Edition London: Prentice Hall.
- Cannella, A.A., Park, J.J., and Lee, H.U. (2008). Top management team functional background diversity and firm performance. Examining the role of team member colocation and environmental uncertainty. *Academy of Management Journal*, 51(4), 765-84.
- Carpenter, M.A., Geletkanycz, M.A., & Sanders, W.G. (2004). Upper echelons research revisited: antecedents, elements and consequences of top management team composition. *Journal of Management*, 30(6), 749-778.
- Certo, S.T., Lester, R.H., Dalton, C.M., & Dalton, D.R. (2006). Top Management teams, strategy and financial performance. A meta-analysis examination. *Journal of Management Studies*, 43(4), 813-39
- Child, J. (1972). Organizational structure, environment, and performance: the role of strategic choice. *Sociology*, 6 (1), 1-22.
- Committee of Sponsoring Organization of the Treadway Commission (COSO). (2004). *Enterprise Risk Management Framework*. New York, American Institute of Certified Public Accountants.
- Cooper, D. and Schindler, P. (2011) *Business Research Methods*. (11th Ed). McGraw Hill, Boston.

- Culp, C. (2002). The revolution in corporate risk management: a decade of innovations in process and product. *Journal of Applied Corporate Finance*, 14 (4), 8-26.
- Dabari, I.J., & Saidin, S.Z. (2014). A theoretical framework on the level of risk management implementation in the Nigerian banking sector: The moderating effect of top management support. *Procedia Social and Behavioral Science*, 164, 627-634.
- Deloach, J.W. (2000). Enterprise-wide risk management – strategies of linking risk and opportunity. *Financial Times*, London, p.5.
- Dezso, C.L., & Ross, D.G. (2012). Does female representation in top management improve firm performance? A panel data investigation. *Strategic Management Journal*. 33,1072-89.
- Dickinson, G. (2001). Enterprise risk management: Its origins and conceptual foundation. *Palgrave Macmillan Journals*, 26(3), 360-366.
- DPM (2006). Directorate of Personnel Management. Retrieved at <http://www.treasury.go.ke/publications/category/40-annual-public-debt.html?download=141:annual-public-debt-report-2006-2007>
- Dutton, J., & Duncan. R. (1987). The influence of strategic planning on strategic change. *Strategic Management Journal*, 8(2), 103-116.
- Fiedler, F.E. (1983). Assessing the validity of Fiedler's contingency model of leadership effectiveness. *Psychological Bulletin*, 93, 404-408
- Freeman, R.E. (1984). *Strategic Management: A stakeholder approach*, Boston, MA: Pitman.
- Fowler, F.J. (1984). *Survey research methods of applied social research methods*, Sage publications.
- Grant, R.M. (1998). *Contemporary Strategy Analysis: Concepts techniques, applications*, Oxford, UK, Blackwell Publishers, p.11

- Gilley, K.M., Walters, B.A., & Olso, B.J. (2002). Top management risk taking propensities and firm performance: Direct and moderating effects. *Journal of Business Strategies*. 19(2), 95-114.
- Government of Kenya (2003). *Economic Recovery Strategy for Wealth and Employment Creation*, Government Press.
- Government of Kenya (2009). *National Treasury Circular No.3/2009*. Government Press.
- Government of Kenya (2012). State Corporations Act chapter 446. Revised Edition 2012. Retrieved from www.kenyalaw.org
- Government of Kenya (2013). Report of the presidential taskforce on parastatal reforms. Retrieved at www.apsea.or.ke/.../76-report-of-presidential-taskforce-on-parastatal-reforms
- Government of Kenya (2015). Mwongozo Code of Governance for State Corporations. Retrieved from www.scac.go.ke
- Hambrick, D.C. (2007). Upper Echelons Theory: An Update. *Academy of Management Review*. 32(2), 334-343.
- Hambrick, D.C. & Mason, P.A. (1984). "Upper Echelons": The organization as a reflection of its top managers?. *Academy of Management Review*. 9, 195-206.
- Hammond, J.S., Keeney, R.L., & Raiffa, H. (2006). The hidden traps in decision making. *Harvard Business Review*, 84(1), 118-126.
- Haworth, G.O., (1984). Social Work Research Practice, and Paradigms. *Social Service Review*, 58(3), 343-357.
- Henderson, A. D., Miller, D., & Hambrick, D. C. (2006). How quickly do CEOs become obsolete? Industry dynamism, CEO tenure, and company performance. *Strategic Management Journal*, 27(5), 447-460
- Herbane, B. (2010), Small business research: Time for a crisis-based view. *International Small Business Journal*, 28(1), 43-64.

- Hitt, M.A., Ireland, R.D, & Hoskisson, R.E. (2011). *Strategic Management: Competitiveness and Globalization*, 7th Edition, Thomson Learning Inc.
- Hubbard, G. (2009). Measuring performance: beyond the triple bottom line, business strategy and the environment. *Journal of Business Strategies*, 19, 177–191.
- Irungu, S.M., (2007). The effect of top management teams on the performance of publicly quoted companies in Kenya. (*Unpublished doctoral dissertation*), University of Nairobi.
- International Organization for Standards. ISO 31000:2009. Risk management – Principles and guidelines
- Kaplan, R.S., & Mikes A. (2014). Towards a contingency theory of enterprise risk management. *Harvard Business School*.
- Kaplan, R. S., & Norton, D.P. (1996). *The Balanced Scorecard: Translating Strategy into Action*, Boston, HBS Press.
- Katz, R. (1982). The effects of group longevity on project communication and performance. *Administrative Science Quarterly*, 27:81-104.
- Katz, D. & Kahn, R. (1978). *The social psychology of organizations*. (2nd Ed.). Wiley, New York.
- Kennerly, M., & Neely, A. (2003). Measuring performance in a changing business environment. *International Journal of Operations and Production Management*. 23(2): 213-229.
- Khandwala, P.N. (1999). *The design of organizations*. New York, Harcourt Brace, Jovanovich.
- Kim, L., & Lim, Y. (1988). Environment, generic strategies, and performance in a rapidly developing country: A taxonomic approach. *The Academy of Management Journal*, 31(4), 802-827.
- Kinuu, D. (2014). Top management team psychological characteristics, institutional environment, team processes and performance of companies listed on the Nairobi securities exchange. *Unpublished PhD thesis, University of Nairobi*.

- Kenya Institute of Public Policy Research Analysis (2009). *Kenya Economic Report. Building a Global Competitive Economy*. Nairobi, KIPPRA Publication.
- Kleffner, A.E., Lee R.B, & McGannon, B. (2003). The effect of corporate governance on the use of enterprise risk management: evidence from Canada. *Risk Management and Insurance Review*, 6(1), 53-73.
- Kobia, M. and Mohamed, N. (2006). The Kenyan Experience with Performance Contracting. *Paper Presented in the 28th African Association of Public administration and Management Annual round Table Conference in Arusha Tanzania*.
- Kosmala, M.W. (2014). Risk management practices from risk maturity models perspective. *Journal of East European Management Studies*, 19(2), 133-159.
- Kosure, J.N. (2015). Perceived value of investment promotion incentives, organizational characteristics, macro-marketing environment and performance of firms in export processing zone in Kenya. (*Unpublished doctoral dissertation*), University of Nairobi.
- Lenz, T.R. (1980). Environment, strategy, organization structure and performance: patterns in one industry. *Strategic Management Journal*, 1(3), 209-226.
- Lundqvist, S.A. (2014). An exploratory study of enterprise risk management: Pillars or ERM. *Journal of Accounting, Auditing & Finance*, 29(3), 393-429
- Machuki, V.N., & Aosa, E. (2011). The influence of external environment on the performance of publicly quoted companies in Kenya. *Business Administration and Management Journal*, 1(7), 205-218.
- Mahapatro, B. B. (2010). *Human Resource Management*. New Age International Publishers.
- Marimuthu, M., & Kolandaisamy, I. (2009). Can demographics diversity in top management team contribute for greater financial performance? An empirical discussion. *The Journal of International Social Research*, (2), 274-286.

- McShane, M.K., Nair, A., & Rustambekov, E. (2011). Does enterprise risk management increase firm value. *Journal of Accounting, Auditing & Finance*, 26(4), 641-658.
- McWhorter, L.B., Matherly, M., & Frizzell, D.M. (2006). The connection between performance measurement and risk management. *Strategic Finance*, 87(7): 50-56.
- Meulbroek, L.K., (2002). Integrated risk management for the firm: a senior manager's guide. *Journal of Applied Corporate Finance*, 14(4), 56-70.
- Michel J., & Hambrick, D. (1992). Diversification posture and top management team characteristics. *Academy of Management Journal*. 35, 9-37.
- Miller, C.C., Linda, M.B., & William, H.G. (1998). Cognitive diversity among upper-echelon executive: implications for strategic decision processes. *Academy of Management Journal*, 19, 39-58.
- Mkalama, R.N. (2014). Top management demographics, strategic decision making, macro-environment and performance of Kenyan state corporations. (*Unpublished doctoral dissertation*), University of Nairobi.
- Muchemi., (2013). Top management team diversity and performance of commercial banks in Kenya. (*Unpublished doctoral dissertation*), University of Nairobi.
- Mugenda, O.M., & Mugenda, A.G. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: ACTS Press.
- Murgor, P.K. (2014). External environment, firm capabilities, strategic responses and performance of large scale manufacturing firms in Kenya. (*Unpublished PhD Thesis*). *School of Business University of Nairobi*.
- Mutuku, C. (2012). Factors influencing relationship between top management team diversity and performance of commercial banks in Kenya. (*Unpublished doctoral dissertation*), University of Nairobi.

- Farah, S.I., & Muneera, E. (2017). A study on enterprise risk management and organizational performance. *International Journal of Civil Engineering and Technology*, 8(10), 184–196.
- Mwangi, P.G. (2018). Top management team heterogeneity and performance of large food and beverage manufacturing firms in Kenya. (*Unpublished doctoral dissertation*), University of Nairobi.
- Nachmias & Nachmias. (2004). Research methods in social sciences. *Administrative Science Quarterly*, 20, 546-558.
- Neville, B., Bell, S., & Whitwell, G. (2004). Academy of management best conference paper. SIM, D1-D6.
- Nielsen, B.B., & Nielsen, S. (2013). Top management team nationality diversity and firm performance: A multilevel study. *Strategic Management Journal*, (34), 373-382.
- Njoroge, J., Gakure, R., Waititu, A., & Katuse, P. (2013). Effects of strategic risk management on the growth of microfinance sector in Kenya. *Prime Journals of Social Science*, 2(7), 402-406.
- Njoroge, J.K (2015). Strategy implementation, performance contracting, external environment and performance of Kenya state corporations. (*Unpublished PhD Thesis*). *School of Business University of Nairobi*.
- Nocco, B.W., & Stulz, R. (2006). Enterprise Risk management: Theory and practice. *Journal of Applied Corporate Finance*, 18(4), 8-20.
- Nunnally, J.C. (1978). *Psychometric Theory. 2nd Edition*. New York: McGraw-Hill.
- Obong'o, S.O. (2009). *Implementation of Performance Contracting in Kenya*, *Public Management Review*, 10(2), 66-84.
- Odundo, E.O. (2012). Environmental context, implementation of strategic plans and performance of state corporations in Kenya. (*Unpublished doctoral dissertation*), University of Nairobi.

- Ojasalo, J. (2009): A model of risk management in globalizing companies. *The Business Review*, 13(1), 200-209.
- Ondari, E.N. (2015). The effect of top management team diversity and competitive environment on the relationship between diversification strategy and performance of companies listed in the Nairobi Security Exchange: (*Unpublished Doctoral Thesis*), University of Nairobi.
- Altman, D.G., & Bland, J.M. (1995). Statistics notes. the normal distribution. *Thebmj*. 310, 298.
- Patton, M.Q. (2002). *Qualitative Research & Evaluation Methods*. 3rd Edition. USA: *Sage Publications*
- Pearce, J. A., & Robinson, R.B. (2003). *Strategic Management: Formulation, Implementation and Control (8th ed.)*. New York, McGraw-Hill/Irwin.
- Pfennigstorg, W. (1977). Governmental risk management in public policy and legislation: problems and options. *Wiley, American Bar Foundation*, 2(2), 255-317.
- Porter, M.E. (1980). *Competitive Strategy: Techniques for analyzing Industries and Competitors*. New York, The Free Press.
- Price Water House Coopers (PWC), (2015). *Enterprise Risk Management in Public Sector*. USA, PWC Publication.
- Price Water House Coopers (PWC), (2012). *Rising to the Next Flow. A Kenya perspective on 2012 state of the Internal Audit Profession Study*. Nairobi: PWC Publication.
- Radner, R., & Shepp, L., (1996), Risk vs. profit potential: A model for corporate strategy. *Journal of Economic Dynamics & Control*, 20(8), 1373-1393.
- Rao, A. (2007). Evaluation of enterprise risk management (ERM) in Dubai: An emerging economy. *Risk Management*, 9(3), 167-187.

- Ravitch, S.M., & Riggan, M. (2012). *Reason & rigor: how conceptual frameworks guide research*. Thousand Oaks, Sage Publications.
- Rizzi, J., Simkins B.J., & Schoening-Thiessen, K. (2011). Enterprise risk management: A review of prevalent practices. Ottwa, *Conference Board of Canada*.
- Rumelt, R.P. (1979). Evaluation of Strategies. Theory and Models. In: Schendel, D.E. and Hofer, C.W., Ed., *Strategic management. A new view of business policy and planning*. Boston, Little, Brown and Co.
- Saunders, M., Lewis, P and Thornhill, A. (2007). *Research Methods for Business Students*, Prentice Hall Financial Times, 4th Edition.
- Schendel, D., & Hofer, C.W. (1979). *Strategic Management: A New View of Business Policy and Planning*. Boston, Little Brown and Co.
- Scott, W.R. & Davis, G.F. (2006). *Organizations and organizing. Rational Natural and open system perspective*. (6th Ed.), Person/Prentice Hall.
- Sunjka, B.P., & Emwanu, B.J. (2015). Risk management in manufacturing SMEs in South Africa, *International Association for Management of Technology*.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics* (5th Ed.). New York, Allyn and Bacon.
- Thompson, J.D. (2003). *Organizations in action. Social science bases of administrative theory*. New Brunswick, New Jersey, Transaction Publishers.
- Thompson, J.D. (1967). *Organizations in Action*. New York, McGraw-Hill.
- Trochim, W. M. (2000). The research methods knowledge base. Retrieved November 13, 2003, from <http://www.socialresearchmethods.net/kb/>
- Ulrich, D., & Wiersema, M.F. (1989). Gaining Strategic and Organizational Capability in a Turbulent Business Environment. *Academy of Management Journal*, 30(2), 115-122.

- Venkatraman N., & Ramanujam V. (1986). Measurement of business performance in strategy research: a comparison of approaches. *The Academy of Management Review*, 11(4), 801-814.
- Verlag, R.H. (2014). Risk management practices from risk maturity models perspective. *Journal of East European Management Studies*, 19(2), 133-159.
- Walker, P.L., Shenkir, W.G., & Barton, T.L. (2003). ERM in practice. *Internal Auditor*, 60(4), 51-55.
- Waweru, N., & Kisaka, E. (2013). The effect of Enterprise Risk Management implementation on the value of companies listed on the Nairobi Stock Exchange: *Journal of Applied Finance & Banking*, 3(3), 81-105.
- Wernerfelt, B. (1984). A Resource Based View of the Firm: *Strategic Management Journal*, 5(2), 171-180.
- Wiersema, M.F., & Bantel, K.A. (1992). Top management team demography and corporate strategic change. *The Academy of Management Journal*, 35(1), 91-121.
- Williams, K. (2005). How is your company managing risks?: *Strategy Finance*, 87(3):21-22, from <http://www.ofm.wa.gov/rmd/erm/>.
- Yamane, Taro. (1967). *Statistics, An Introductory Analysis*, 2nd Ed., New York, Harper and Row.
- Yegon, C.K. (2015). Effect of Enterprise Risk Management Determinants on Financial Performance of Listed Firms in Kenya. (*Unpublished Doctoral Thesis*), Jomo Kenyatta University of Agriculture and Technology.
- Zenger, T.D., & Lawrence, B.S. (1989). Organizational demography: The differential effect of age and tenure distributions on technical communication. *Academy of Management Journal*, 23(2), 355-376.
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business research methods*. Cengage Learning.

APPENDICES

Appendix I: Research Questionnaire

Dear Respondent,

This questionnaire seeks to gather data from Kenyan State Corporations regarding macro environment, top management demographics, enterprise risk management and performance of the state corporations in Kenya. The information that you will provide shall only be used for the academic research purpose. Moreover, your anonymity and confidentiality will be strictly respected. Agreeing to respond to this questionnaire indicates consent to participate in the study. The researcher highly appreciates your input and participation. You are urged to freely provide accurate and objective answers to the questions herein as it is only the researcher who will have access to your responses.

SECTION I: ORGANIZATIONAL PROFILE

1) What is the Name of your Organization

2) What is its parent ministry _____

3) How many full time employees does this organization have?

Below 50 []	101- 250 []	501-1000 []
51-100 []	251-500 []	1000 and above []

4) Indicate the number of years that this organization has been in existence since its establishment?

Below 5 []	6- 10 []	11-15 []	Above 15 []
-------------	-----------	-----------	--------------

5) What is the organization's scope of operation? (Kindly tick where appropriate)

- i. National (All over Kenya) []
- ii. Regional (some parts of Kenya) []

6) Kindly indicate the ownership structure of this organization? (Kindly tick where appropriate)

- i) Entirely government owned
- ii) Both private and government owned

7) In what category does your organization belong in terms of profit making?

(Kindly tick where appropriate)

- i) Commercial
- ii) Non-Commercial

SECTION TWO: ENTERPRISE RISK MANAGEMENT

One aspect of the study is Enterprise risk management (ERM). ERM is a strategic management practice that integrates risk management dimensions of *content setting* (i.e identifying risks and their mitigation), *risk assessment* (monitoring risks and implementing mitigations), *risk evaluation* (measuring effectiveness of mitigation measures) and *communication* (keeping tract and reporting on all risk related aspects for improvement).

8) Kindly indicate your agreement with the following statements concerning Enterprise Risk Management in your organization. Use the following scale that ranges from 1-5 (5 = Very great extent, 4 = Great extent, 3 = Moderate extent, 2 = Small extent and 1 = Not at all) and tick where appropriate.

	STATEMENTS	Respondent's rating				
		1	2	3	4	5
	<i>Context Setting</i>					
	My organization possess a formal strategy to pursue its mission and vision					
	My organization has clearly written roles, structure and responsibilities for its functions					
	Performance goals are set periodically to evaluate if the organization is realizing its purposes					
	All staff signs individual performance contracts in my organization					
	Authority and responsibilities for the entire top management are formally defined					
	My organization has an approved risk management policy					

vii.	The existing risk policy provides for the identification of strategic, operational and compliance risks					
viii.	There exists a board level committee with the mandate to oversight risk management in this organization					
	My organization has a function responsible for risk management headed by a senior manager					
	<i>Risk Assessment</i>					
	My organization identifies Strategic risks and their likelihood to affect the capacity of attaining the set objectives of the organization					
	My organization identifies Operational risks and their likelihood to affect the capacity of attaining the set objectives of the organization					
xii.	My organization identifies Compliance risks and their likelihood to affect the capacity of attaining the set objectives of the organization					
	My organization identifies quality management system and their likelihood to affect the capacity of attaining the set objectives of the organization					
xiii.	My organization identifies corruption risks and their likelihood to affect the capacity of attaining the set objectives of the organization					
	The organization has an approved risk appetite statement					
	<i>Risk Evaluation</i>					
xiv.	The risk management function evaluates the on-going effectiveness the organizational risks					
xv.	The organization assesses impact that risks may have on key performance indicators					
xvi.	Formal reports are submitted to the Board level periodically on the state of risk assessment and mitigation					
xvii.	My organization has an automated system to track risk-related information					
xviii.	Alternative risk response plan is established for all the significant risks identified by the organization					
xix.	The organization undertakes structured and frequent updates on risk management					
	<i>Communication</i>					
xx.	The organization hold formal risk management meetings to assess the status of enterprise risk management implementation					
xxi.	All employees have been sensitized on the content of enterprise risk management policy					
xxii.	All employee are aware of the organization's risk appetite levels					

xxiii.	Risk management strategies are shared with all the lines of management					
xxiv.	Employees in the organization are aware about identified risks and mitigation measures					
xxv.	Identified risk are shared with the relevant organizational stakeholders as appropriate					

SECTION THREE: MACRO ENVIRONMENT

Macro-environment is part of the wider external environment where an organization operates and consists of factors beyond the organizational control including those emanating from Political, Economical, Social, Technological, Ecological and Legal factors. On the basis of the implications of the macro environment to your organization, please answer the questions below.

- 9) To what extent have the following aspects of the macro-environment impacted on the operations of your organization. Use the following scale that ranges from 1-5 (5 = Very great extent, 4 = Great extent, 3 = Moderate extent, 2 = Small extent and 1 = Not at all) and tick where appropriate.

	Statement	1	2	3	4	5
	<i>Political</i>					
i	Interest from various stakeholders					
ii	Government pronouncements on changes in policy from time to time					
iii	The political stability of the country					
iv	Change of political regime					
v	Devolved Government structure					
vi	The country's overall political stability					
	<i>Economic</i>					
vii	Changes in Government's fiscal policies					
viii	Inflation trends in the country					
xi	Level of the country's overall economic development					
xii	Fluctuation in foreign exchange rates					
xiii	Changes in Interest rates					
xiv	Changes in the taxation regime and policies					

xv	Level of Annual Budget allocations to the organization					
	<i>Social</i>					
xiv	Demands of host communities influenced by norms					
xv	Cultural practices e.g. land demarcation, farming practices, pastoralism, etc					
xvi	Population growth rate					
xvii	Crime rates and acts of terrorism					
xvii	Ethic and Tribal inclinations					
xix	Gender issues					
	<i>Technological & Ecological</i>					
xx	Rapid developments in ICT e.g. internet usage, digitization of services etc					
xxi	Occurrences of natural disasters e.g. floods, draught etc					
	<i>Legal</i>					
xxii	Introduction of environmental-sustainability legislation					
xxiii	Civil society organizations agitation for rights					
xxiv	Changes in the Kenya Constitution 2010 and subsequent legislation					
xxv	The legal basis prescribing the mandate of the organization					
xxvi	Legislation on matters related to the organization's business					

SECTION FOUR: TOP MANAGEMENT DEMOGRAPHICS

This section focuses on top management demographics (TMD). These are observable individual characteristics that are exhibited by individual top managers. In this study, top managers are regarded as management staff occupying heads of departments levels to the Director General, Managing Director Chief Executive officer or any equivalent title in this organization.

10) Please indicate total number of your top managers accordingly to gender

(Only those at top levels 1 to 3);

Male.....(Numbers)

Female..... (Numbers)

- 11) Kindly indicate the number of managers stated in question (10) above, that are within each of the age brackets indicated in the table below?

Age bracket	Indicate Number of managers
Below 30	
30 -35	
36-40	
41-45	
46-50	
Above 50	

- 12) What percentage of the top managers stated in question (10) possess the qualifications shown in the table below as their highest-level qualification?

Academic/ Professional Qualification	Indicate percentage (%)
Ph.D (Doctorate Degree)	
Masters	
First Degree	
Diploma/ Higher Diploma	
Others	

- 13) Kindly indicate percentage of the top managers stated in question (10) above having the following academic background from the tertiary level of education.

Area of study	Percentage (%)
<i>Physical Sciences</i> (Engineering, Medical sciences, Technology, Veterinary, ICT, Biological sciences, Architecture, Agricultural sciences, Nuclear sciences)	
<i>Humanities & Social Sciences</i> (Law, Political Science, Sociology, Communication, Journalism, International Relations, Education, Marketing, Administration, Finance, Accounting, Economics, Human Resources, Procurement, Insurance, Strategic Management, Environmental Studies, Information Science, Education)	
Others (Specify)	

- 14) Kindly indicate total number of years that the top managers stated in question (10) above have served the organization.

Year	Number of members
Less than 5 year	
Between 6 and 10years	
Between 11 and 15 years	
Above 15 years	

15) Indicate the extent to which the following statements relating to top Management demographics apply to your organization?

Use the following scale that ranges from 1-5 (5 = Very great extent, 4 = Great extent, 3 = Moderate extent, 2 = Small extent and 1 = Not at all)

STATEMENTS	Respondent's rating				
	1	2	3	4	5
Young top managers in the organization are more flexible and supportive of risk based thinking as compared to their counterpart older top managers					
The organization values older top managers more than their younger risk-based thinking counterparts due to their long and unique experience					
Top managers in the organization who possess post graduate levels of education integrate risk management in their functional operations more as compared to their counterparts without similar qualifications					
Top managers orientation (i.e. science, business, arts, social sciences e.t.c) tends to influence their flexibility to exercise risk-based thinking					
Top managers in shorter tenure in the organization easily adopt integrated risk management practices as compared to their counterparts with much longer tenure					
Female top managers tend to easily adopt and integrate risk management practices and policies as compared to their male counterparts					
Male top managers are more risk-based thinkers (i.e. consider risk factors and how to mitigate the same at all times) as compared to their female counterparts					

SECTION FIVE: ORGANIZATIONAL PERFORMANCE

This section focuses on the performance of state-owned corporations in Kenya in line with State Corporations government performance contracting evaluation.

DATA COLLECTION TEMPLATE FOR FINANCIAL INDICATORS

16) How did your *revenue collection* performance range against your set target for each of the following past five years.

Year	Below Target by Upto 10%	Above target by Between 1% - 10%	Above target by Between 11% - 20%	Above target by Between 21% - 40%	Above target by > 41%
2011/12					
2012/13					
2013/14					
2014/15					
2015/16					

17) How did your utilization of funds (budget absorption) performance range against your set target for each of the following past five years

Year	Below Target by >50%	Below Target by Between (41-49%)	Below Target by Between (21-40%)	Below Target by Between (5% to 20%)	On Target (i.e 96%-100% utilization)
2011/12					
2012/13					
2013/14					
2014/15					
2015/16					

NON-FINANCIAL INDICATORS

18) Using the template provided below, please indicate your corporate *performance rating including the composite mark* (e.g. *Excellent with 4.87 marks*) by the government performance contracting office in the last five years.

Overall Corporate Performance Rating

Year	Excellent (Indicate Composite Mark)	Very Good (Indicate Composite Mark)	Good (Indicate Composite Mark)	Fair (Indicate Composite Mark)	Poor (Indicate Composite Mark)
2011/12					
2012/13					
2013/14					
2014/15					
2015/16					

19) Using the template provided below, indicate the customer satisfaction index for this organization in the last five years.

Customer Satisfaction Index

Year	Below 40%	Below 41-50%	Between 51% - 60%	Between 61% - 70%	Above 70%
2011/12					
2012/13					
2013/14					
2014/15					
2015/16					

20) In the data collection template provided below, please indicate the range of your corporate service delivery index as per your government performance contract evaluation in the past five years.

Service delivery Index

	Below 40%	Below 41-50%	Between 51% - 60%	Between 61% - 70%	Above 70%
2011/12					
2012/13					
2013/14					
2014/15					
2015/16					

Kindly put down any comment with respect to the subject of this study.

Would you wish to receive a complimentary copy of results of this study?

Yes No

THANK YOU FOR YOUR PARTICIPATION

Appendix II: List of Kenyan State-Owned Corporations

Purely Commercial State Corporation

- | No. | Name of State Corporation |
|------------|-----------------------------------------|
| 1. | Kenya Literature Bureau |
| 2. | Chemilil Sugar Company Ltd |
| 3. | Kenya Meat Commission |
| 4. | Development Bank of Kenya Ltd |
| 5. | University of Nairobi Enterprise Ltd |
| 6. | South Nyanza Sugar Company Ltd |
| 7. | Kabarnet Hotel Limited |
| 8. | New Kenya Co-operative Creameries |
| 9. | Simlaw Seeds Uganda |
| 10. | KWA Holdings |
| 11. | Kenya Wine Agencies Ltd |
| 12. | Rivatex (East Africa) Ltd |
| 13. | Kenya Reinsurance Corporation Ltd |
| 14. | Simlaw Seeds Kenya |
| 15. | Consolidated Bank of Kenya |
| 16. | Nyayo Tea zones Development Corporation |
| 17. | Kenya National Assurance Co. (2001) Ltd |
| 18. | Agro-Chemical & Food Company |
| 19. | Mount Elgon |
| 20. | National Housing Ltd |
| 21. | School Equipment Production Units |
| 22. | Kenya National Shipping Line |
| 23. | Nzoia Sugar company Ltd |

24. Research development Unit Company Ltd
25. Kenya National Trading Corporation
26. Kenyatta University Enterprise Limited
27. Kenya Safari Lodges Ltd (Voi Lodge, Ngulia Lodge Mombasa Beach Hotel)
28. Simlaw Seeds Tanzania
29. Muhoroni Sugar company Ltd
30. Jomo Kenyatta Foundation
31. Sunset Hotel Kisumu
32. Golf Hotel Kakamega
33. University of Nairobi Press
34. Yatta Vineyard Ltd

State Corporation with Strategic Function

No	Name of State Corporations
-----------	-----------------------------------

- | | |
|-----|-------------------------------------------------------------------|
| 1. | Kenya Ports Authority |
| 2. | Kenya Airports Authority |
| 3. | Kenya power & Lightening Company |
| 4. | Kenyatta International Conference Centre |
| 5. | Kenya Development Bank (After AFC, IDB, KIE, ICDC and TFC merged) |
| 6. | Kenya Broadcasting Corporation |
| 7. | National Oil Corporation of Kenya |
| 8. | Kenya Post Office Savings Bank |
| 9. | Kenya Veterinary Vaccine Production Institute |
| 10. | Geothermal Development Company |
| 11. | Kenya EXIN Bank |

12. Numerical Machining Company
13. Kenya Railways Corporation
14. Kenya Seed Company
15. Kenya Pipeline Company
16. Kenya Electricity Generating Company
17. National Cereal & Produce Board
18. Kenya Electricity Transmission Company
19. National Water Conservation & Pipeline Corporation
20. Kenya Animal Genetics Resource Centre
21. Postal Corporation of Kenya

State Agencies - Executive Agencies

No. Name of Institution

1. National Hospital Insurance Fund
2. Kenya Medical Supplies Authority
3. Information Communication Technology Authority
4. Higher Education Loans Boards
5. Internal Revenue Service (when customers department was transferred from KRA)
6. Kenya Accountants & Secretaries National Examination Board
7. Investor Compensation Fund Board
8. Livestock Development and Promotion service (new)
9. Financial Reporting Centre
10. Kenya Trade Network Agency
11. Fisheries Development and Promotion Service (new)
12. Kenya Wildlife and Forestry Conservation Service
13. Agricultural Development Corporation
14. National Council for people with Disabilities
15. Drought Management Authority
16. Kenya Academy of Sports
17. Crops Development and Promotion Service (new)

18. Kenya Cultural Centre
19. National Coordinating Agency for Population and Development
20. Kenya Deposits Protection Authority
21. National Aids Control Council
22. Kenya Ordnance Factories corporation
23. Anti-Female Genital Mutilation Board
24. Export Processing Zone Authority
25. Kenya Ferry Service Ltd
26. LAPSET Corridor Development Authority
27. Kenya Institute of Curriculum Development
28. Nuclear Electricity Board
29. Kenya Investment Promotion Service (After merger of KenInvest, Brand Kenya Board, EPC and KTB)
30. Kenya National Examination Council
31. National Museums of Kenya
32. Kenya Film Development Service
33. Policy holders Compensation Fund
34. Kenya Law Reform Commission
35. Kenya Intellectual Property Service (as a result of merger of Anti-Counterfeit Agency, Kenya Copyright board & Kenya Industrial Property Institute)
36. Kenya National Bureau of Statistics
37. Custom and Boarder Security Service (succeeds Kenya Citizens and Foreign National Management Service)
38. Biashara Kenya (after merger of Youth Enterprise Development Authority, Uwezo Fund, Women Fund & Small and Micro Enterprise Authority)
39. Kenyatta National Hospital
40. National Youth Council
41. Nairobi Centre for International Arbitration
42. Kenya Road Board
43. Kenya National Innovation Agency
44. Konza Technopolis Authority.
45. Kenya National Highway Authority
46. National Social security Fund Board of Trustees
47. Leather Development Council

48. Bomas Of Kenya
49. National Irrigation Board
50. Moi Teaching and Referral Hospital
51. National Quality Control Laboratories
52. Local Authorities Provident Fund
53. National Campaign Against Drug Abuse Authority
54. National Council for Law Reporting
55. Unclaimed Financial assets Authority
56. National Cancer Institute of Kenya
57. Constituency Development Fund
58. National Industrial Training Authority
59. Sports Kenya
60. Tourism Fund
61. Water Resource Management Authority
62. Water Service Trust Fund

State Agencies – Independent Regulatory Agencies

No. Name of Institution

1. Water Service Regulatory Board
2. Public Benefits Organization Regulatory Authority
3. National Construction Authority
4. Technical & Vocational & Training Authority.
5. National Environmental Management Authority.
6. Livestock Regulatory Authority
7. National Commission for Science, Technology and Innovations
8. Health service Regulatory Authority
9. Communication Authority of Kenya
10. National Land Transport & Safety Authority
11. Kenya Film Regulatory Service
12. Public Procurement Oversight Authority
13. Kenya Bureau of Standards
14. Tourism Regulatory Authority
15. Kenya Civil Aviation Authority
16. Kenya Maritime Authority

17. Commission for University Education
18. A Energy Regulatory Commission
19. Agriculture, Fisheries and Food Authority
20. Kenya National Accreditation Service
21. Competition Authority of Kenya
22. Mining and Oil Regulatory Service
23. Kenya Plant and Animal Health Inspectorate Service (Took over from National Biosafety Authority)
24. Council for Legal Education
25. Financial Supervisory Council (resulted from merger of SACCO Societies Regulatory Authority, Capital Markets Authority, Retirement Benefits Authority & Insurance Regulatory Authority)

State Agencies –Public Universities, Research Institutions, Tertiary and vocational training institutes

No. Name of Institution

1. Moi University
2. Jaramogi Oginga Odinga University of Science and Technology
3. University of Nairobi.
4. Kenya Medical Training College
5. Kibabii University College
6. Meru University of Science & Technology
7. Karatina University
8. Masinde Muliro University of Science & Technology
9. Chuka University
10. Murang'a University College
11. Maseno University
12. Egerton University
13. Kenya Agriculture and Livestock Research Organization
14. Kenya Marine & Fisheries Research Institute Cooperative University college
15. Kirinyaga University College
16. Kenya Medical Research Institute
17. Kenya Utalii College
18. Kisii University

19. Kenya Institute of Mass Communication
20. Laikipia University
21. Kenya School of Government
22. Kenya Institute of Public Policy Research & Analysis
23. Garissa University College Kenya School of Law
24. Kenya Water Institution
25. Kenyatta University
26. Maasai Mara University
27. National Crime Research Centre
28. Machakos University College
29. University of Eldoret
30. Rongo University College
31. Technical University of Mombasa
32. Dedan Kimathi University
33. Kenya Multi-Media University
34. Taita Taveta University College
35. Kenya Forestry Research Institute
36. The Technical University of Kenya
37. Bukura Agricultural College
38. University of Kabianga
39. Embu University College
40. Jomo Kenyatta University of Agriculture and Technology.
41. Kenya industrial Research and Development Institute
42. Pwani University
43. South Eastern Kenya University

Source: Taskforce on Parastatal Reforms Report (GoK, 2013)

Appendix III: Introductory Letter



UNIVERSITY OF NAIROBI
COLLEGE OF HUMANITIES & SOCIAL SCIENCES
SCHOOL OF BUSINESS

Telephone: 4184160-5 Ext 215
Telegrams: "Varsity" Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, KENYA

6th April, 2018

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

INTRODUCTORY LETTER FOR RESEARCH

EMMA ANN OTIENO – REGISTRATION NO. D80/93891/2014

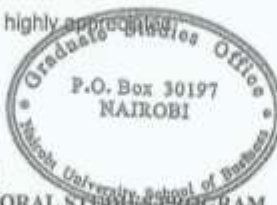
The above named is a registered PhD candidate at the University of Nairobi, School of Business. She is conducting research on *“Enterprise Risk Management, Macro-Environment, Top Management Demographics and Performance of Kenyan State Owned Corporations”*

The purpose of this letter is to kindly request you to assist and facilitate the student with necessary data which forms an integral part of the thesis. The information and data required is needed for academic purposes only and will be treated in **Strict-Confidence**.

Your co-operation will be highly appreciated.

Thank you.

PROF. MARTIN OGUTU
COORDINATOR, DOCTORAL STUDIES PROGRAM
SCHOOL OF BUSINESS



MO/jm

Appendix IV: NACOSTI Research Permit

<p style="text-align: center;">CONDITIONS</p> <ol style="list-style-type: none">1. The License is valid for the proposed research, research site specified period.2. Both the License and any rights thereunder are non-transferable.3. Upon request of the Commission, the Licensee shall submit a progress report.4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.5. Excavation, filming and collection of specimens are subject to further permission from relevant Government agencies.6. This License does not give authority to transfer research materials.7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.8. The Commission reserves the right to modify the conditions of this License including its cancellation without prior notice.	<p style="text-align: center;"> REPUBLIC OF KENYA</p> <hr/> <p style="text-align: center;"> National Commission for Science, Technology and Innovation RESEARCH CLEARANCE PERMIT</p> <p style="text-align: center;">Serial No.A 17068 CONDITIONS: see back page</p>
<p>THIS IS TO CERTIFY THAT: MRS. EMMA ANN OTIENO of UNIVERSITY OF NAIROBI, 54001-200 Nairobi, has been permitted to conduct research.</p> <p><i>on the topic: INFLUENCE OF MACRO ENVIRONMENT AND TOP MANAGEMENT DEMOGRAPHICS ON THE RELATIONSHIP BETWEEN ENTERPRISE RISK MANAGEMENT AND PERFORMANCE OF KENYAN STATE OWNED CORPORATIONS</i></p> <p>for the period ending: 17th May, 2019</p> <p> Applicant's Signature</p>	<p>Permit No : NACOSTI/P/21/84822/20191 Date Of Issue : 17th May, 2018 Fee Received : Ksh 2000</p> <p style="text-align: center;"></p> <p style="text-align: center;"> Director General National Commission for Science, Technology & Innovation</p>