

95435

**DETERMINANTS OF INTERNAL AUDIT IN THE AUDIT OF
STRATEGIC RISK OF STATE CORPORATIONS IN KENYA**

VICTOR ODINDO OTIENO

Submitted in part fulfillment of the requirements for the degree of Master of
Commerce (Forensic Accounting) at Strathmore University

School of Management and Commerce

Strathmore University

Nairobi, Kenya

2013

This thesis is available for Library use on the understanding that is copyright material and that no quotation from the thesis may be published without proper acknowledgement.

Declaration

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

© No part of this thesis may be produced without the permission of the author and Strathmore University

Name: Victor Odindo Otieno

Signature.....

Date...19/12/2014.....

Approval

The thesis of Victor Odindo Otieno was reviewed and approved by the following:

Dr. David Wangombe

Dean School of Management and Commerce

Strathmore University

Prof. Ruth Kiraka

Dean, School of Graduate Studies

Abstract

This study aims to establish the determinants of internal audit in the audit of strategic risk in state corporations in Kenya. It further examines the relationship between audit of strategic risk and the determinants of internal audit. A quantitative research approach was employed in this research. This was further complemented by a descriptive survey design. An email based questionnaire was used to collect data. Findings were drawn from the questionnaire survey distributed to 178 state corporations in Kenya targeting internal auditors. This study also provides descriptive information on the determinants of internal audit. The determinants of internal audit were found to play an important role in the audit of strategic risk. Management support of the functions of the internal audit as a determinant of internal audit was seen as the most influencing factor compared to the other determinants. The determinants included independence of the internal audit function, presence of a risk management unit, budgetary allocation to internal audit, and internal auditors' skills. Almost all the internal auditors questioned considered strategic risk as a key determinant in their audit mission. The findings disclose a clear picture of the determinants of internal audit in the audit of strategic risk, as well as an enhanced appreciation of the strategic role of internal audit in state corporations. This study reveals the determinants of internal audit in the audit of strategic risk of state corporations in Kenya. It also provides a framework that would guide internal auditors as they audit strategic risk in their organizations. Although this study was limited to state corporations in Kenya, the findings could be extended to different country settings which would provide great opportunities for future research.

Definition of Key Terms

Strategic risks – refers to those threats or opportunities that materially affect the ability of an organization to survive (Allan & Beer, 2006).

Audit of strategic risk – it is the examination of the significant risks that strategic initiatives bring to the organization, and key risks and points of failure in those strategic initiatives undertaken by the organization.

Table of Contents

Definition of Key Terms.....	iii
List of Figures.....	vii
CHAPTER 1: INTRODUCTION.....	1
1.1 Background of Study.....	1
1.2 Statement of the Problem.....	4
1.3 Research Objectives.....	5
1.4 Research Questions.....	5
1.5 Scope of the Study.....	5
1.6 Significance of the Study.....	5
1.7 Chapter Summary.....	6
1.8 Organization of the Study.....	6
CHAPTER 2: LITERATURE REVIEW	7
2.0 Introduction.....	7
2.1 Nature of the Study.....	7
2.2 Review of State Corporation Performance	7
2.2.1 Peculiarity of State Corporations Operations.....	9
2.3 Strategic Risk.....	11
2.3.1 Introduction	11
2.3.2 Strategic Risk Framework.....	12
2.3.3 Strategic Risk and Performance	14
2.3.4 Strategic Risk Model.....	15
2.4 Internal Audit In Public Enterprises	16
2.4.1 Internal Audit and Strategic Risk.....	18
2.5 Agency Theory	25
2.5.1 Introduction	25
2.5.2 Agency Theory	25
2.5.3 Empirical studies of Agency Theory.....	26
2.6 Conclusion	27
2.7 Chapter Summary	28



CHAPTER 3: RESEARCH METHODOLOGY	29
3.1 Introduction.....	29
3.2 Research Design	29
3.3 Population	30
3.4 Data Collection Method.....	31
3.5 Data Analysis	32
3.6 Research Quality.....	35
3.7 Ethical Considerations	36
CHAPTER 4: PRESENTATION OF RESEARCH FINDINGS AND DISCUSSION	37
4.1 Introduction.....	37
4.2 Response Rate.....	37
4.3 Findings on Tenure of Organization and Internal Audit Function	38
4.4 Descriptive Statistics.....	39
4.4.1 Assessment and Audit of Strategic Risk	39
4.4.2 Resources Allocated to Risks	41
4.4.3 Existence of a Risks Management Unit.....	45
4.4.4 Internal Audit Skills and Experience.....	45
4.4.5 Management Support of Internal Audit Function	46
4.4.6 Internal Audit Independence	48
4.5 Additional findings on the determinants of internal audit effectiveness	49
4.5.1 Listing in the Nairobi Securities Exchange (NSE).....	49
4.5.2 Involvement in determining Internal Audit Plan.....	50
4.6 Regression analysis.....	51
4.6.1 Multicollinearity	51
4.7 Pearson correlation results	52
4.7.1: The relationship between audit of strategic risk and internal audit skills	54
4.7.2: The relationship between audit of strategic risk and independence of internal audit function.....	55
4.7.3: The relationship between audit of strategic risk and management support	55
4.7.4: The relationship between audit of strategic risk and proportion of budget allocated to strategic risk	55

4.7.5: The relationship between audit of strategic risk and existence of a risk management unit	56
---	----

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS.....	59
5.1 Introduction.....	59
5.2 Summary of Research Objectives, Methods, and Findings	59
5.3 Conclusion	61
5.4 Implications	63
5.5 Recommendations for Further Research.....	64
5.6 Limitations of the study	65
5.7 Chapter Summary	66
REFERENCES.....	67
Appendix 1: Letter of introduction	80
Appendix 2: Research Questionnaire	81

List of Figures

Figure 1 Strategic risk model.....	16
Figure 4.2: Percentage of Resources used in Key Risk Areas by Internal Audit	41
Figure 4.3: Tenure of Internal Audit to Allocation of Resources to Strategic Risks in the Organization.....	42
Figure 4.4: Functional Category to Resource Allocation	43
Figure 4.5: Functional Category to Overall Resources Allocated to Internal Audit Activities.....	44
Figure 4.6: Existence of Risk Management Unit Based on Functional Category	45
Figure 4.7: Resources and Listing in the Nairobi Securities Exchange.....	50

List of Tables

Table 1 Population of the Study	31
Table 2 Response Rate Classification.....	37
Table 3 Number of Years the Organization has been in Existence	38
Table 4 Tenure of Internal Audit Function.....	39
Table 5 Assessment and Audit of Strategic Risk.....	40
Table 6 Internal Auditors' Skills	46
Table 7 Perception of Management in Internal Auditing as Value Adding	47
Table 8 Internal Audit Independence.....	48
Table 9 Involvement of Determining Internal Audit Plan.....	51
Table 10 Multicollinearity	52
Table 11 Pearson Correlation Statistics	53
Table 12 Values of the Correlation Coefficient.....	54
Table 13 Model Summary Analysis	57
Table 14 Evaluation of Independent Variables.....	57

Acknowledgements

To complete a project of such a nature cannot be accomplished in isolation. The contributions of various people in various ways, however has made it possible. To this end I would wish to extend my appreciation to the following.

I thank the Almighty God for bestowing upon me with wisdom and perseverance to complete my studies and indeed throughout my life.

To my supervisor Dr. David Wangombe who supported me throughout my thesis with his enthusiasm and knowledge. I attribute the successful completion of my Master's degree to his patience and effort.

To the examiners who gave me insights towards the study, that enriched it.

Finally, I thank my family for the unequivocal support throughout my studies at the University.

CHAPTER 1: INTRODUCTION

1.1 Background of Study

Internal Audit has continued to play a central governance role and has gained increasing importance in most organizations in recent years (Carcello, Hermanson, & Raghunandan, 2005). It has traditionally been a behind -the-scenes player, more often than not assisting the audit committee perform their duties, and providing management with some assurance of the activities of the organization. In the public sector, it was known to be more of an administrative unit which verified assets, determined the accuracy of transactions before payment verification, and reported on events that had occurred (Khoury, 2011). Its function was deemed as one of the pillars of public sector governance (Institute of Internal Auditors, 2006). Diamond (2002) foreshadows that there has been a quiet revolution of the internal audit function in many countries which has enabled it to take a more comprehensive view of the economic and social implication of government operations, popularly referred to as “value for money” or performance audit.

The Government of Kenya is moving towards a greater level of transparency, efficiency, and accountability in the use of public money and service delivery as demanded by chapter 12 of the Constitution of Kenya (Government of Kenya, 2010). Consequently, internal auditors, by the very nature of being privy to the operations of the corporations, have a more arduous task and greater pressure to demonstrate competency and professionalism in managing and minimizing risk.

In Kenya, an increasing number of state corporations’ failures and mismanagement highlight the need for effective internal audits in the public sector (Okibo & Kamau, 2012). This is despite studies that have been done proposing that public sector organizations should establish and maintain an effective an internal audit function (Buttery, 1985; Coombs & Jenkins, 1994; Dowsett & Morris, 1981; Jones & Pendlebury, 2000). The internal audit system in Kenya was abolished in 1962, which resulted in an avalanche of problems such as laxity in the management of public resources, non-compliance with relevant regulations and laws, and lack of internal

controls. The government, however, reintroduced of the system and implemented appropriate structures in 1984, following a joint IMF/World Bank report that highlighted the weaknesses of Kenya's internal audit function (IMF, 2000). Through Treasury circular no.16 of 2006 (Ministry of Finance, 2006), it became mandatory to establish internal audit in state corporations and in ministries. Consequently, internal audit reforms became a key component of the public financial management reform strategy of the Government (Government of Kenya, 2006).

The Institute of Internal Auditors (2006) advances that the public sector represents a principal-agent relationship, where the officials acting as the principal's agent need to account to the principal for their use and stewardship of resources. To ensure this therefore, an effective internal audit would work to reduce the risks inherent in such a relationship. Thus the IIA (2006) identifies the role of auditing in the public sector as three fold: identification and evaluation of risk management, control, and governance processes.

Strategic risk has become a key aspect of business and competitive strategy (Clarke & Varma, 1999). Whatever business an organization is involved in, there is usually an element of strategic risk that it encounters: and successful management of risk ultimately determines its performance (Ojiako, 2012). Varying schools of thoughts have been provided by scholars on the perceptions of strategic risk, with some perceiving it as related to value (Ojiako, Johnson, Chipulu, & Marshall, 2010; Trewin, Ojiako, & Johnson, 2010), while others relate it to the outcome of corporate events (Loras, 2011; Shoham & Fiegenbaum, 2002). Strategic risk is of critical importance to the success of an organization (Ojiako, 2012) as it provides a key ingredient to the performance of the organization. Recent studies from scholars such as Anderson and Frigo (2011) and Loras (2011) examine how organizations can incorporate risk in the strategic decisions they make especially under economic and competitive conditions.

Though literature on the application of agency theory to examine the value of internal audit in strategic risk is rare, there is an established line of research that uses the agency theory to depict the role of external auditors in organizations (DeAngelo, 1981; Watts &

Zimmerman, 1983): varied literature also discusses the use of agency theory and other explanatory variables in monitoring the effects of the internal audit function (Sarens & Abdolmohammadi, 2011). The findings state that audited financial statements are effective in monitoring agency costs, and that the internal audit functions has a monitoring role in corporate governance. Adams (1994) argues however, that the agency theory can provide for richer and more meaningful research in the internal audit discipline. To this end, internal audit has also been considered as monitoring response to agency costs (Anderson, Francis, & Stokes, 1993; DeFond, 1992; Ettredge, Reed, & Stone, 2000). There have however been few studies that have explored the agency theory to ascertain the importance of the internal audit function and the extent of its monitoring role in reducing agency problems still remains unclear (Sarens & Abdolmohammadi, 2011).

In order to effectively play one of its key roles of evaluation and implementation of risk, the internal audit unit must ensure that it understands the various types of risk that the corporation is likely to face. The uncertainty of the environment in which state corporations are operating presents insurmountable tasks to internal auditors. They have to widen their scope to address the risk management needs of the corporations, given that they play a key role in monitoring the corporations' risk profile and in identification of areas to improve risk management (Goodwin-Stewart & Kent, 2006). This requires them to develop a risk centric approach in their activities. Internal auditors must be able to demonstrate that their focus meets the expectations of stakeholders in terms of transparency and accountability.

For the internal audit function to carry out its work successfully then its effectiveness has to be examined. This study thus looked at the determinants of the internal audit function, particularly in the audit of strategic risk. This is an important concept that has rarely been studied in scientific literature (Cohen & Sayag, 2010). Eden and Moriah (1996) enumerated the importance of exploring the determinants of internal audit effectiveness as being able to improve the processes of the organization as follows: educating members in better ways of doing their jobs, shortcomings will be identified

and thus improved performance, it acts as deterrence to abuse, and process improvements where things will be done the right way. This study therefore rightfully contributes to the literature.

The development of internal audit as a substantial element in both public and private sectors has necessitated action to ensure that its performance meets quality standards. It is equally important that there is a way in which its productivity is determined to enhance its goals and objectives (Dittenhofer, 2001). This study examined determinants of internal audit which were identified as organizational setting, internal audit quality, management support and resources allocated in audit of strategic risk of state corporations (Mihret & Yismaw, 2007).

1.2 Statement of the Problem

Research has indicated that strategic risk remains an immature activity in many organizations and has not been focused on by internal auditors in state corporations, despite the important role that it plays in the performance of the organization (Anderson & Frigo, 2011; Cooper & Faseruk, 2011; Mitchell, 2010). There is scant evidence to show that such a study has been done in Kenya with respect to state corporations in particular the determinants of internal audit. Studies done outside Kenya have focused on effectiveness of internal audit (Mihret & Yismaw, 2007); internal audit size (Sarens & Abdolmohammadi, 2011); the use of internal audit (Goodwin-Stewart & Kent, 2006); monitoring effects of the internal audit function (Sarens & Abdolmohammadi, 2011)); independence of internal audit (Christopher, Sarens, & Leung, 2009) but none had studied on the determinants of internal audit in the audit of strategic risk in state corporations. The research hence examined the determinants of internal audit in audit of strategic risk.

1.3 Research Objectives

The key objective of this research was to investigate the determinants of internal audit in the audit of strategic risks in state corporations. The specific objectives of the study were:

1. To identify the extent of internal audit in the audit of strategic risk in state corporations
2. To identify the determinants of internal audit in the audit of strategic risk in state corporations.

1.4 Research Questions

The study concentrated on the following research questions:

1. What is the extent of internal audit in the audit of strategic risk in state corporations?
2. What are the determinants of internal audit in the audit of strategic risk in state corporations?

1.5 Scope of the Study

The research was limited to the public sector in particular state corporations in Kenya and the respective internal audit units or their equivalent.

1.6 Significance of the Study

The research is important as it will be able to address the concerns of the stakeholders as follows: The audit and accountancy profession will be informed on the strategic roles internal audit play. There will be focused trainings on the effectiveness of audit of strategic risk. The government, a principal shareholder in State Corporations will be periodically informed through the board of directors of the strategic risks facing the public enterprises which could be a determinant in resource allocation. Internal audit unit will shift the perception of it being viewed as a 'corporate cop', towards it being seen as an important partner in business decision making (Frigo, 2002).

The study thus examined the determinants of internal audit effectiveness that enabled internal audit to audit and consider strategic risk in the organization.

1.7 Chapter Summary

The changing operating environment requires that organizations respond to the changes appropriately to sustain shareholder value. In addition to providing the traditional assurance functions on compliance that most internal auditors of state corporations do, they should develop a forward looking approach to the planning focuses on major business risks and exposures. They should be engaged in the strategic planning process so that it clearly addresses the risks which the corporation will be undertaking (Cathcart & Kapoor, 2010). The success of this approach, will however hinge on how well the interplay of the determinants of internal audit effectiveness are harnessed by the internal auditors of state corporations.

This study sought to ascertain the determinants of internal audit that are used in the evaluation of strategic risk in state corporations in Kenya. These determinants enhance the strategic role of the Internal Auditor and subsequent improvement in performance of state owned enterprises.

1.8 Organization of the Study

The remainder of the study is structured as follows: Chapter 2 provides a review of extensive literature on state corporations and their operations, strategic risk importance, determinants of internal audit effectiveness and how agency theory applies to the role internal auditors' play in audit of strategic risk. In chapter 3, the research methods employed is discussed. Chapter 4 presents the findings, and finally, conclusions and recommendations for further research are provided in chapter 5.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

The reviewed literature extensively examines the performance of state corporations and the peculiarity of their operations as well as strategic risk and its importance to the organization. The review further provides the effectiveness of internal auditors in auditing strategic risk of state corporations. Finally, the literature review outlines the importance of the importance of the agency theory in the study.

2.1 Nature of the Study

Internal audit is emerging as a key resource to management in both the private and public sectors (Dittenhofer, 2001). One of the substantial roles is the audit of risks of the organization. To effectively play one of its key roles of evaluation and implementation of risk, internal auditors must ensure that they understand the various types of risk that the corporation is likely to face. This requires that internal audit performance meets the desired goals and objectives. The determinants of internal effectiveness will act as a guide in the determination of how successful internal auditors will be in the audit of strategic risk. The interplay of the factors: internal audit quality, management support, resources allocated to internal audit and organizational setting Mihret et al. (2007) will arguably be the key attributes of internal audit effectiveness used in examining the implications they have on audit of strategic risk.

The agency theory will be applied in the study to examine the internal audit discipline and its importance to the state corporations. Adams (1994) argues that the agency theory can provide richer and more meaningful research to the internal audit community as it examines the principle agent relationship.

2.2 Review of State Corporation Performance

State owned enterprises in Kenya proliferated after Kenya achieved political independence in 1963. This saw the participation of government in both commercial and economic activities rapidly expand, resulting in its dominance in the various sectors of the country. Sessional Paper No. 10 (Government of Kenya, 1965) on African Socialism and its application to planning in Kenya enumerated the desire for the establishment of

parastatals in order to accelerate economic social development; redress regional economic imbalances; increase Kenya citizens' participation in the economy; promote indigenous entrepreneurship; and promote foreign investment. Consequently, they play an important role of being key actors in the development of the country's economy, hence the need for having a critical focus on enhancing their efficiency as proposed in the Draft Sessional Paper on privatization of state corporations (Government of Kenya, 2005).

In 1979 and 1982, comprehensive reviews of the state corporations' performance were carried out, details of which are contained in the report on the Review of Statutory Boards (Government of Kenya, 1979), and the Report of the Working Party on Government Expenditures (Government of Kenya, 1982) respectively. The reports revealed that the public enterprises were not realizing the mandate for which they were created. Key findings in the Review of Statutory Boards Report (1979) were that the growth in the public enterprises sector had not been accompanied by development of efficient systems to ensure that efficiency is achieved in the role that they play, and it was evidently clear that there was prolonged inefficiency, financial mismanagement, waste and malpractices in such institutions. Given the sorry state of affairs presented, it was clear that there were no adequate governance structures to monitor the risks that these institutions were operating in.

The report on the Working Party on Government Expenditures (1982) equally published similar findings. It unequivocally concluded that productivity in the public enterprises was quite low. This is despite an allocation of an excessive portion of the government budget which went into keeping them afloat. This can however be attributed to the long term fiscal problem that the country faced at that time. One of the key recommendations given in the Working Party on Government Report (1982) was that the government should reduce exposure to risk in areas in which the private sector can take the risk without the necessary intervention of the government. This recommendation, however, did not extend the need to have sufficient structures also to be included in the institution

framework that would enable them to also be conscious on treading in those businesses that could hamper their livelihood.

The two reviews resulted in some measures that were put in place. Key among them was the enactment of the State Corporations Act, which though a major stride to bring sanity to the sector much more was needed as the corporations continued to fail. They depended on the limited public sector financing. Multiplicity of objectives, poor accountability, unclear strategic objectives, political interference, and inability to harness available resources to modernize their operations further contributed to the failure of the state corporations. Poor service delivery then became the norm and the lack of renewed focus on the long term goals of the enterprises resulted in a vicious circle, thereby increasing the country's cost of production. What was lacking to ensure that the main focus of these institutions is maintained? Were there key business objectives that they were to pursue, and if there were, what mechanisms had been put in place to ensure that the environment in which they operated in was continuously assessed, and such risks identified and incorporated in the overall strategic plan of the enterprise? The framework on the operations discussed below seeks to explain these issues.

2.2.1 Peculiarity of State Corporations Operations

A state corporation refers to all the corporations which the government has control over according to the State Corporation Act (Government of Kenya, 1987). This definition will be used for the purposes of the study. A synopsis of the State Corporation Act states; it has a perpetual succession, is capable in its name to sue and be sued and is capable of holding and alienating movable and immoveable properties. The President designates ministerial responsibility for any state corporation and issues relating to the Vice-President and the several Ministers as deemed fit. The nature of the economy, the political system, and the level of development in the country do, to some extent influence the management of the corporations.

An enterprise endeavoring to maximize returns in a competitive market, with managers that focus on the organic growth and are instigated well enough to rejoin to the dynamics

of the competition then efficiency will be enhanced. Such circumstances rarely confront state enterprises, hence the laxity in their strategic direction. One explanation of poor performance could be that the activities of public enterprises are that they are publicly owned (Tambunan, 1993). This stems from the argument provided by Affandi (1978), that the yardstick of success is not only derived from profit maximization but due to other objectives pursued by the public enterprise. This may however have a detrimental effect as demonstrated by Caves, Christensen, Swanson, and Trethway, (1982), by inducing activities that should act as social services rather than profit maximization and taking the 'national interest' rather than the 'economic goals' into perspective. According to Shirley (1983) the state enterprises are expected to achieve noncommercial goals which more often than not are inconsistent with the maximization of profit. She further alludes that the officers are not held accountable for results and the way they are recruited, trained, and rewarded may not meet the expectations of a commercial set up.

It could further be argued that the public ownership provides for laxity in operations and as a consequence injures the commercial ethic. A major portion could be that politicians do influence the goals of the public enterprise and, in particular, the less enthralling noncommercial goals are substituted for economic and financial objectives (Tambunan, 1993). The core sources as argued by Alchian (1965) and Niskane (1971) are that political interference in decision making and bureaucratic failure are probably the primary sources of inefficiency associated with public enterprises.

This then brings to play the idea of considering whether measurement of performance should be a factor to consider when evaluating the existence of a public enterprise. The problem, however, is that there is no generally accepted criteria of appropriate measurement that has been found yet (Tambunan, 1993). Some authors advocate for profitability as the basis, because as articulated by Maniatis (1970), profitability norm is an "objective and dependable test, as it is based on the measurement of a one-dimensional effect encompassing the entire spectrum of the determinants of efficiency". Other pundits on economic efficiency of the state enterprises provide a divergent view on the matter. Schloss (1970), for instance suggests that social cost benefit analysis

should be used to determine the performance, whereas (Khera (1963) contends that economic use of resources together with methods of management functioning should be the criteria used. Other writers suggest that it can be measured against a range of criteria in terms of financial, commercial, economic or social (Tambunan, 1993). It should follow therefore that the viability of state enterprises cannot be judged on a commercial basis alone as they have a purpose beyond simple profit maximization. This means there is a need to get non-marketing tools that could provide for a semblance of cost efficiency and guarantee transparency and accountability in the overall management of state enterprises.

The constraints described above or the nature in which state enterprises are operated could be an excuse for the dismal performance. The subsequent review of extant literature in strategic risk should be able to demonstrate that the value of shareholders, survival, and the reason d'être of state enterprises can still, in this present time, be achieved.

2.3 Strategic Risk

2.3.1 Introduction

Cooper and Faseruk (2011) define risk as the exposure to the chance of loss from one's own actions or decision. In this way it can be said to be a matter of choice as opposed to fate (Berstain, 1996). There is a push by the investors of the state owned enterprises (the tax payers) for the management of such enterprises to take responsibility for the decisions that they make. This in effect brings risk management from the confines of the government's cubicle or of the legislator's desk to being a central element for the directors, as it directly impacts the sustainability of the corporation. Jones and Sutherland (1999) assert that "a major risk exposure and source of business failure and lack of opportunity success has been the failure to manage change". Arguably, most of the leaders of the state corporations still continue to use the "rearview mirror" approach to addressing most of the decisions that they are faced with, which detracts them from following the strategic direction of the enterprise.

Emblemsvag and Kjolstad (2002) emphasize that effective risk management can enable decision makers to increase their knowledge on their options about uncertainty, hence reducing the risk of business failure. This clearly indicates that the various risks facing the enterprise need to be managed and interlinked. The focus by board of directors on only some risks, especially financial and operational will see most of the corporations succumb to failure. Accordingly, there is need to pay greater emphasis on strategic risk which is greater than what most enterprises track, report, and manage (Emblemsvag & Kjolstad, 2002).

2.3.2 Strategic Risk Framework

Admittedly, literature that directly addresses strategic risk is both fragmented in content and lacking in quantity (Cooper & Faseruk, 2011). This is a clear indication that not enough research or focus has been put forth by the relevant players, despite the critical role strategic risk plays in business enterprises. Due to this there is no distinct description of strategic risk, making its study quite multifarious.

Emblemsvag and Kjolstad (2002) define strategic risk as what an organization is exposed to while pursuing its primary objective. This description is broad as the exposure of the organization cannot be easily harnessed. Mitchell (2010) in the Economic Intelligence Unit Report describes it as the risks that pose a threat to a company's ability to set and execute its overall strategy. Allan and Beer (2006) concede that strategic risks are those threats or opportunities that materially affect the ability of an organization to survive. The common focus of the definitions as provided by the scholars is survival of the organization and hence this definition is used as a framework to develop the hypotheses on the internal audit and assessment of strategic risk. This means that the organization has to examine the environment in which it operates for it to be successful, competitive, and remain a float. In essence, most of the strategic issues exist in a state of uncertainty from which strategic risks (and other business related risks) can emerge as other objectives are pursued. Strategic risks are therefore the most important risks that an organization faces (Loras, 2011). Strategic risks range from project risks to operational risks, which are in most cases limited in their impact

Given the varied definitions provided for strategic risk, there is a view held by many that it is about managing risk “strategically,” as opposed to managing it as a category similar to operational, financial or other risks (Aron, Clemons, & Reddi, 2005). This resulting confusion may be one of the reasons why strategic risk has not attracted further research in management literature (Cooper & Faseruk, 2011).

Cooper and Faseruk (2011) further progress this argument, by asserting that there is a lack of research in the area. This undoubtedly contributes to the complexity of the concept of strategic risk. It could be that the less quantifiable the risks of a particular category are, the lesser the attention it receives. Those categories which can be quantified precisely, conversely receive the greatest attention from both academic researchers and corporate risk managers (Gates, 2006; Lusk, Halperin, & Heilig, 2011). This then implies that existing literature on strategic risk still requires more research.

Strategic risk is increasingly getting its bearing and becoming more important in the management field (Cooper & Faseruk, 2011). The reality is that the way environmental enterprises operate does not fit the picture of constancy perceived by highly structured macro-economic models. It takes strategic planning onto the unknown given the chaotic and complex nature of the environment (Burgelman & Grove, 2007). Despite this, it is still expected that organizations will have to find ways in which they operate, and more credence will be given to those that will be able to adapt to novel ways when responding to risks. Ojiako (2012) stipulates that the impact of an organization’s inability to creatively think about strategic risk has been devastating.

People’s perception and behavior strongly influences strategic risk (Das & Teng, 2001). This is due to their dynamism, uncertainty, and interconnectedness, hence in most instances the need to be managed as complex processes as opposed to discrete events. This, in effect, requires a shift in the manner in which they are thought of and managed. The influence of behavior on strategic risk is further discussed by Das and Teng (2001) who argue that strategic risk draws heavily on studies of individual risk behavior. The argument here is that to a certain degree, strategies of organizations reflect the nature of the top managers in terms of their subjective inclines, including how they solve

problems, their beliefs, attitudes, as well as background (Das, 1986; Hambrick & Mason, 1984). Consequently, the risk taking behavior of the top managers would have a great force of the riskiness of the strategic decisions that are made. The people in the organization then become the key resources that can be harnessed to identify and manage strategic risk as they arise. This presents a challenge in public enterprises given that the sourcing of the top management are to some extent influenced by political patronage, thereby obfuscating a process that would otherwise yield different results.

In the public sector, more particularly state owned enterprises that rely on the exchequer to finance their operations, strategic risk is rife due to enduring periods of innovations and limited resources. An understanding of this particular type of risk is therefore paramount for survival.

2.3.3 Strategic Risk and Performance

Studies have shown that business failures are most often caused by strategic risk failures (Allan & Beer, 2006; Beasley & Frigo, 2007; Sobel, 2011). Strategic risk, as articulated by Emblemvag and Kjolstad (2002), is what an organization is exposed to in pursuit of its primary objectives. This then makes its management important to managers and hence an exploration of how it impacts on the effectiveness of the decisions made is paramount to the business processes (Hagigi & Sivakumar, 2009), and subsequently to performance. The inability of the existing risk management techniques to cope with strategic risk is what drove the emergence of new methods specifically suited to measuring strategic risk (Allan & Beer, 2006). This is so because they focused on predicting and controlling risk events instead of the risk processes. The weaknesses are further compounded by the unique characteristics of strategic risks that make them detrimental to organizations. Given the interconnected nature of strategic threats, they are often exacerbated by failure of managers to respond to the variety of interdependent risks that occur for a limited period of time. Allan and Beer (2006) have further stated that the myopic gaze given by the traditional risk management system has resulted into emphasizing that strategic risks are through warning signs that are either not recognized or passed on in a timely manner for management action. Hence the managers'

perception of strategic threats can be different from the events that cause actual harm to the organization.

Strategic risk management is critical to the success of business given that it plays an important role in business and competitive strategy (Clarke & Varma, 1999). Whatever business an organization is involved in, there is usually an element of strategic risk that it encounters, and the success of how this risk is managed ultimately determines the organization's performance (Ojiako, 2012). Varying opinions on the conceptions of strategic risk have been provided by scholars, with some perceiving it as related to value (Ojiako et al., 2010; Trewin et al., 2010), while others view it as relating to outcome of events (Loras, 2011; Shoham & Fiegenbaum, 2002). Given this, strategic risk then becomes of critical importance to the success of the organization (Ojiako, 2012). Strategic risk thus provides a key ingredient to the performance of the organization.

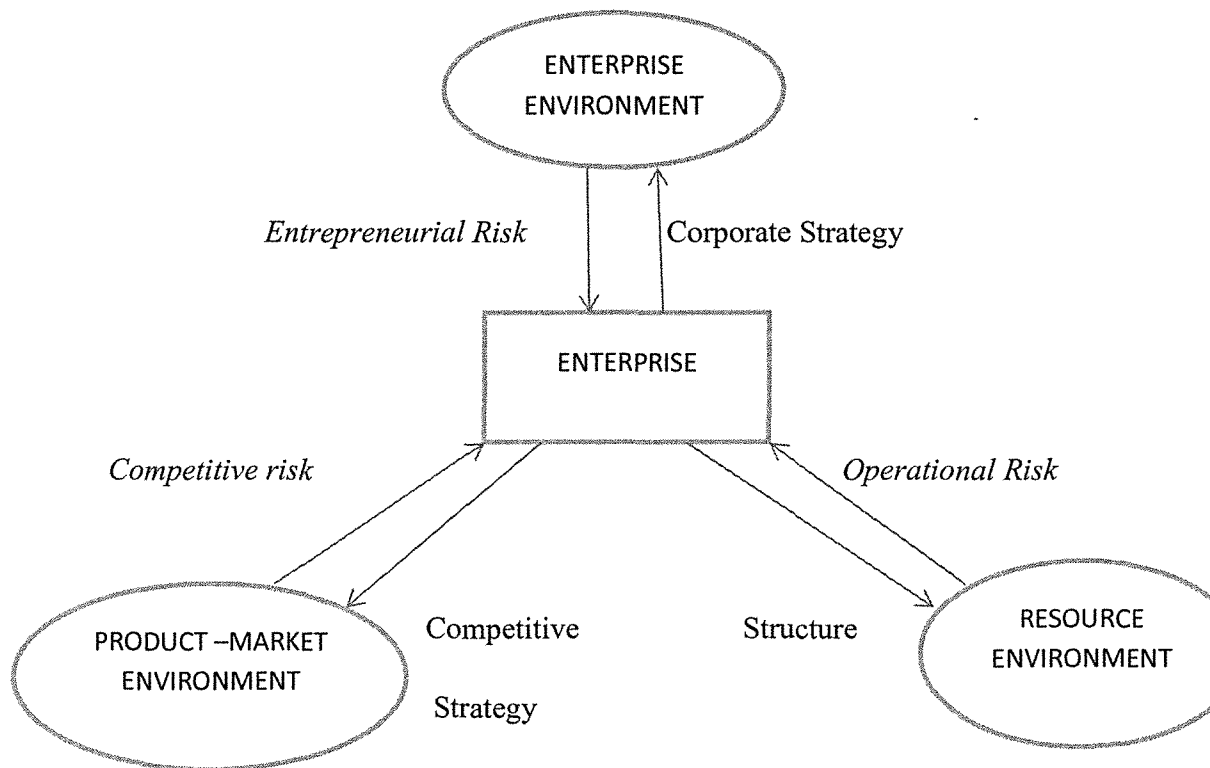
2.3.4 Strategic Risk Model

Winfrey and Budd (1997) provided a model which illustrates the three core problems (entrepreneurial problem, engineering problem and administrative problem) on which strategic management is built on given its complexity and dynamism. Based the model on the three problems identified that management should continually address, Miles and Snow (1978) suggested that, strategic management perspective involves: entrepreneurial risk, operational risk, and competitive risk.

In the strategic risk model, Winfrey and Budd (1997) define entrepreneurial risk as the potential relative loss associated with the enterprise conducting business activities and relationships in a particular enterprise environment, relative to other alternate environments. Competitive risk is defined as the relative loss to the enterprise associated with developing and maintaining relationships with its product market environment that sustain competitive advantage. Operational risk as relative loss to the enterprise associated with the relationship with its resource environment, how the enterprise can be able to acquire resources necessary to conduct its business effectively (Yuchtman & Seashore, 1971).

The model below integrates the three problems with the enterprise environment levels: the enterprise environment, the product-market environment and the resource environment.

Figure 1 Strategic risk model



Source: Winfrey and Budd, SAM Advanced Management Journal: 1997

2.4 Internal Audit In Public Enterprises

Recent studies indicate that internal auditing plays a small role in matters relating to strategic risks of an organization (Sobel, 2011). For organizations that are managed by the state, an unfortunate picture is presented, as the focus of the function is on financial, regulation and legal risks (Tambunan, 1993).

Despite most of public sector enterprises' concerns of delivering service with a social objective rather than profit maximization, they are still faced with all kinds of risk in

pursuit of their objectives. The success of such enterprises is dependent on how far they can foresee and manage risk (Vijayakumar & Nagaraja, 2012). The nature of internal audit allows it to be used as an effective tool to manage the various risks that the organization encounters.

Internal audit in the public sector is taunted to serve simple administrative functions. However this role requires a revolution given the level of transparency and accountability that is required by the general public in management of state resources. There are larger and complex operations demanding greater competence and professionalism from internal auditors, if they are to address the changing environment of public enterprises.

The Institute of Internal Auditors (IIA, 2011) defines internal audit as an “independent, objective assurance and consulting activity designed to add value and improve an organization’s operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluating and improving the effectiveness of risk management, control and governance processes”. This definition shows that internal audit has dramatically shifted from an emphasis on accountability about the past to assisting managers operate effectively and efficiently for improved future outcomes (Goodwin, 2004; Nagy & Cenker, 2002; Stern, 1994). Ruud (2003) argues that the internal audit function in today’s business environment has become a key support function for audit committees, management, board of directors, external auditors and other stakeholders. In addition, Archambeault, DeZoort and Holt (2008) concluded that internal audit report has the potential to complement existing governance disclosures, increase stakeholder confidence in governance quality and, financial reporting reliability. Given that the IIA definition incorporates both the public and private sectors (Goodwin, 2004), it can be used to examine the involvement of public enterprise internal auditors in assessing strategic risk.

Internal audit’s involvement in strategic risk is effective when it meets the intended outcome it is supposed to bring about. Van Gansberghe (2005) explains that the demand for internal audit services in public sector is evaluated by the extent to which it is

effective and contributes to the demonstration of effective and efficient service delivery. Sawyer (1995) puts it that an internal auditor's job is not completed until all defects are corrected and remain corrected.

If the internal audit activity in the public enterprises meets all the objectives as set in the guideline provided by IIA, a new dimension will be realized. Research conducted by IIA reveals that there is an "expectation gap" between what stakeholders view as the potential of internal audit and what they actually deliver (Weingardt, 2001). The guidelines for Audit Committees in the Public Sector document (2006) demonstrate how value can be unlocked through internal audit. It has raised the level of internal audit to that of a strategic player, and proven the importance of internal audit to the achievement of the goals of the public enterprise.

Interestingly, the preparedness of internal audit to position itself in a way that enhances value varies from corporation to corporation. Van Gansberghe (2005) however argues that the change to modern auditing by public enterprises is a herculean task. It demands a shift from simply ensuring compliance with rules and regulations, to a model that requires organizational and cultural change.

2.4.1 Internal Audit and Strategic Risk

Internal audit is critical to the success of business. The positioning of the unit, given the roles it is required to play puts it in a better position to assess the strategic risks of the organization. This is, however only possible if it aligns itself to the strategic initiatives, and shares the same vision with the top management, according to the Vonya Global survey on the strategic role of internal audit (Vonya Global, 2009). The study further indicated that both senior management and internal auditors want internal audit to focus more on evaluating strategic risks. The survey further asserted that a large number of internal audit departments are performing extensive audits that commence with the strategic goals of the organization. This demonstrates that internal auditors are shifting the focus of audits to the strategic objectives that create value to the organization. In addition, the survey indicates that internal auditors are involved in a number of meetings where strategy is discussed. Involvement in strategic meetings displays the importance

attached to the audit unit in the organization. This supports the studies done by Ojiako (2012) that related the assessment of strategic risk to performance, and that of Trewin et al. (2010) and Ojiako et al. (2010) which perceive it to adding value in the organization.

The Vonya Global survey further reveals, internal audit function should have an effective process to identify all the potentially risks that the organization is likely to encounter. The process will ensure that the audit function effectively carries out its function. The process will thus be deemed incomplete if it is not capable in evaluating all the core risks of the organization.

2.4.2 Determinants of the Internal Audit Function

There are a number of studies that have examined characteristics of the internal audit function (Arena & Azzone, 2009; Leung, Cooper , & Robertson, 2004; Pappe, Scheffe, & Snoep, 2003) which most relate to the determinants of its function. For instance, in assessing the contribution of internal audit to financial reporting quality, it was found that they were related to the resources available to the internal audit function, its size, and the level of expertise within the function (Mat Zain, Subramaniam, & Stewart, 2006). The status and function have also been found to relate to the performance of the internal audit function (Leung P et al., 2004). In studying the effectiveness of in-house versus outsourced functions, Coram, Ferguson and Moroney (2008) established that having a full or partial in house internal audit function increases the likelihood of detecting and self-reporting fraud.

Mihret and Yismaw (2007) define the effectiveness of the internal audit function as when it able to meet the intended outcome as it is supposed to. The effectiveness, thus influence its ability to monitor strategic risk and this will provide the framework for examining the determinants. Van Gansberghe (2005) elucidates that the determinants of this function is based on the extent to which it is able to contribute to the demonstration of effective and efficient service delivery. He argues that perceptions and ownership, organization and governance framework, legislation, improved professionalism, conceptual framework, and also resources are the factors which influence internal audit effectiveness (Van Gansberghe, 2005). In addition, Mihret and Yismaw (2007), who

examined the organizational factors affecting the effectiveness of internal audit, pointed out the following factors: organizational setting, managerial support, resources, and internal audit quality. The interaction of these factors leads to the improvement of the internal audit effectiveness (Mihret & Yismaw, 2007). The study done by Mihret and Yismaw (2007) will thus be further used to examine the implication the factors have on the audit of strategic risk.

There are five determinants of internal audit that will be examined for the purposes of this study. They are as follows:

a) Organizational Setting

This refers the status of internal audit in the organizational structure and the integrity of the internal audit office's internal organization (Mihret & Yismaw, 2007). Mihret and Yismaw, (2007) further explain that the status of the internal audit function in the organization should be high enough to ensure effective communication with senior management, and its activities independent from the auditees. This is attributed to the fact that internal audits operations are conducted in an environment that is close and dependent on the associations with management. This, raises questions on independence and objectivity (Glasscock, 2002). The definition will be used as a framework to develop the first hypotheses.

While examining the expectations and perceptions of senior management in Belgian firms, Sarens and DeBeelde's (2006) findings indicated that in situations where internal audit operates as a management support role, there is a lack of perceived objectivity and the reporting relationship with the audit committee is weak. In addition they established that management expectations greatly influence internal audit objectivity. Christopher et al. (2009) in examining threats to internal audit independence established the following as being detrimental to the audit function, where the CEO or the CFO approve the budget for internal audit office and provide input to the internal audit plan, the head of internal audit not reporting functionally to the audit committee, the audit committee not having the key responsibility of hiring, dismissing and evaluating the internal audit manager.

James (2003) asserts that internal audit functions that report to senior management are portrayed as not being able to objectively carry out their work as compared to those that report solely to the board of directors' audit committee. Abbot, Parker and Peters (2010) investigate the association between audit committees' oversight of internal audit function and nature of internal audit activities and drew a strong positive relationship between the associations. Thus;

H1. The internal auditors' audit of strategic risk is associated with the reporting structure of the internal audit function

b) Managerial Support

The support of management is critical to the internal audit assessment of strategic risk and also to the acceptance and appreciation of the internal audit function within the enterprise (Sarens & DeBeelde, 2006). Mihret and Yismaw (2007) established that internal audit effectiveness is strongly influenced by internal audit quality as well as management support. This is equally supported by Cohen and Sayag (2010) in their study of determinants of Internal Audit effectiveness in Israeli organizations. Adams (1994) articulated that it is in the interest of management to maintain an effective internal audit. The extent to which management implements recommendations of internal audit determines its effectiveness (Van Gansberghe, 2005) and hence involvement in strategic risk analysis with management. Additionally, performance standards of auditing (no.2010, no.2020 & no.2060) provide ways in which management support can influence the effectiveness of the internal audit function. The head of internal audit should consider the input from management on the internal audit plan, who provides input to the strategic risks among other risks that rank highly (Doyon, 1996; Hubbard , 2000). The audit function also requires support from the senior management, preferably the CEO to accomplish its day to day activities. This will provide for an appropriate stature for the function such as having unrestricted access to staff, information, and documentation (Sarens & DeBeelde, 2006). The study thus predicts that those internal audit functions that are supported by management are more likely to audit strategic risk. Hence the following hypothesis:

H2. The internal auditors' audit of strategic risk is associated with the support of management

c) Budgetary Allocation to Internal Audit

Prior studies have examined factors that are associated with internal audit existence and the budgetary allocation to the internal audit function. Carcello et al. (2005) examined the factors associated with United States public firms' investment in internal audit, and showed that Internal Audit budgets are positively related to company size, operating cash flow, and audit committees' review of the Internal Audit budget. The more resources are allocated to assessing strategic risk, the greater the value will be to the organization. Mihret and Yismaw (2007) in the study of internal audit effectiveness in the Ethiopian public sector revealed that the lack of authority for budget administration by the internal audit function adversely influences performance of the internal audit office. Abbot et al. (2010) in an investigation on the association between the audit committee's oversight of the internal audit function and nature of their activities, document a strong positive relationship between the amount of internal audit budget allocated and internal controls based activities. The study, therefore expects an association between the resources allocated to internal and audit of strategic risk. This gives rise to the following hypothesis:

H3. The proportion of internal audit budget allocated to strategic risk activities in the internal audit function is associated with the audit of strategic risk

d) Internal Audit Competency

Prior empirical evidence shows that the extent to which the internal auditors' work will be relied upon by the external auditor will be greater if the internal audit function possesses the attributes associated with competency (Ho & Hutchinson, 2010; Messier & Schneider, 1988). Though not directly related to the consideration of internal audit and audit of strategic risk, they could arguably act as proxies.

There have been studies that examined the criteria for assessing the competency of the internal audit function, which included how long the internal audit function has been in

the organization, Internal audit training programs and professional certification (Brown , 1983; Ho & Hutchinson, 2010; Mat Zain et al., 2006) and internal audit experience in auditing (Messier & Schneider, 1988; Suwaiden & Quasim, 2010).

Competency of the internal audit team also determines the quality of internal audit in involvement in strategic risk (Zain, Subramaniam, & Stewart, 2006). They identified the level of experience among internal auditors as being indicative of the quality of the internal audit function. In addition Gramling and Meyers (2009) argue that skilled and qualified internal auditors are indicative of Internal Audit quality. Though no certification in internal audit is necessary, Gramling and Meyers (1997) posit that certification of internal audit is perceived as demonstrating a significant level of competence and important for advancement within the internal audit function.

Mohammed, Zain, Subramaniam and Yusoff (2012) in their study of internal attributes and external audit's reliance on internal audit argue that the longer the tenure of internal audit existence in an organization (in years), the more mature and competent the internal audit unit will be. The argument here is that an internal audit unit that has been in existence for longer will have invested more in hiring, which leads to a better quality internal audit function. As a result internal auditors will be more susceptible to audit of strategic risk in the organization. Sarens, Marco, D'onza and Melville (2011), in examining whether internal audit practice is related to the age of the internal audit function, also posit that experienced internal audit function an organization have more auditors with internal audit qualifications, have a quality assurance and improvement program, have a more diversified internal audit agenda, and more frequently perform advanced internal audit activities.

One of the most important criteria of describing competence is the experience of the internal audit function (Messier & Schneider, 1988). Most of the external auditors use this to determine the effectiveness and extent of reliance of the internal audit function. (DeZoort, 1998) propagates that inexperienced internal audit staff may lack the technical knowledge required and may not comprehend the dynamic operations of the business of the organization. In addition Brody, Golen and Reckers (1998) articulate that internal

audit staff with prior experience and expertise in auditing are expected to provide valuable input toward improving the internal controls of the organization, and hence factor in the audit of strategic risk in their audit plan. For the purposes of the study skills, experience and years of experience was used as a basis for examining the competency of internal auditors in audit of strategic risk. Thus, the study tests whether there is an association between the experience and skills of the internal auditor and audit of strategic risk.

H4. Internal auditors experience and skills are associated with the audit of strategic risk

e) Presence of a Risk Management Unit

The audit of strategic risk by the internal audit function is also determined by the presence of the risk management unit. This is due to the fact the internal audit function may not possess the appropriate skills to understand the depth of risk management (Fraser & Henry, 2004). If the internal audit functions on its own, then there is likelihood of a weak link in the risk management “chain,” according to Fraser and Henry (2004).

Piper (2002) proposed that in situations where most of the internal audit functions are with individuals with a finance background (Page & Spira, 2004) the organization needs to have a dedicated chief risk officer or the department’s report on risk management and internal audit function report on the essential processes. This, he however argues, is also dependent on the size of the organization.

The future trend, as envisaged by Baker (2001), is likely to be that the two functions internal audit and risk management will be separate activities, with internal audit having an advisory capacity as opposed to being the one that exercises decision making authority (Lindow & Race, 2002). Internal audit will in addition be the conduit for collating the necessary assurance for boards on risk management and control (Bolton, 2000). The Institute of Internal Auditors (2004) equally gives the same verdict that as risk management becomes embedded, internal audit’s role may reduce, despite being the “champion” of risk management. This leads to the following hypothesis:

H5. The presence of a risk management unit enhances the audit of strategic risk

2.5 Agency Theory

2.5.1 Introduction

Most of the literature available is replete with researches that have used agency theory to examine the role of external audit in corporations and also how it relates to organizational theory (Wallace, 1980; Antle, 1982; Wilson, 1982; Hardman, 1991; Parkash & Venable, 1993). There has been however little focus on the application of the theory to internal audit (Miguel & Govindarajan, 1984). Spraaakman (1997) however did a study on the transaction cost economics as a theory for internal audit which is a variation of agency theory. Later in a bid to demonstrate the relevance of the theory to internal audit Sarens and Abdolmohammadi (2007) examined the use of agency theory to predict the size of the internal audit function. In a more current study, Sarens and Abdolmohammadi (2011) have studied the monitoring effects of the internal audit function using the agency theory against other explanatory variables. Agency theory has also been used to examine why some organizations have internal audit functions while others do not, how organizational changes affect internal audit functions and why internal audits vary as they do (Adams, 1994). The agency theory has also been applied to ascertain why some public accountants contract for internal auditing (Caplan & Kirschenheiter, 2000). This clearly demonstrates that there is room for further application of the theory in internal auditing.

2.5.2 Agency Theory

Agency theory, also referred to as contracting cost theory stems from the positivist group of theories whose roots are from the financial economics literature (Walker, 1988). The theory advances that the firm consists of a nexus of contracts between the owners of economic resources who are the principals, and managers, who are the agents charged with using and controlling these resources (Jensen & Meckling, 1976). The theory further argues that there is information asymmetry where the agents have more information than the principals. This in effect deters the principal's ability to effectively monitor whether their interests are adequately being served by agents (Adams, 1994). There is also the assumption that the principal and agent will act rationally and will use

the contracting process to maximize their wealth. The resulting effect is that there may be a “moral hazard” problem (Jensen & Meckling, 1976), where to maximize their own wealth, the agents may be working in conflict of what the principal expects.

Internal audit, is thus deemed to be a bonding cost borne by agents to satisfy the principal’s demands for accountability (Sherer & Kent, 1983; Watts, 1988) and also that they are acting responsibly and in a manner consistent with their contract of employment. Managers will hence tend to protect their salaries and to also secure their positions. Wallace (1980) aptly argues that the salary paid to the agent is indeed the principle’s cost for monitoring the agent’s actions. It is therefore in the interest of the agent to ensure that there is a monitoring mechanism like internal auditing in place. This will reduce the risk of principals making adverse changes to manager compensation.

2.5.3 Empirical studies of Agency Theory

Sarens and Abdolmohammadi (2007) examined how the agency model can be used to identify the determinants of the size of the internal audit function in Belgian Companies. The findings demonstrated a significant exploratory power for the agency model. The positive relationship as defined by the variables of measure revealed the importance of the monitoring role of the internal audit function in reducing external principal/agent problems.

There is also an established line of research that uses agency theory to address the role of external audit in enterprises (DeAngelo, 1981; Watts & Zimmerman, 1983). The findings of this research collaborate that the provision of audited financial statements is indeed an effective monitoring response to agency cost. In addition, various studies carried out by Anderson et al. (1993); DeFond (1992) and Ettredge et al. (2000) consider internal audit as a response to agency costs.

Adams (1994) has also identified three areas that could be of interest to the internal auditing profession that would benefit from an agency theory interpretation. The areas include: Internal –external auditor relationships where a study by Oliverio and Newman (1991) concludes that there is considerable participation in external audits by internal auditors; Internal audit outsourcing where agency theory may predict that organizations

operating in complex business environments are less likely to contract out their internal audit function than those operating in less complex environments (Adams, 1994); the internal auditor in organizational rationalization, where Campbell and Mohan (1992) articulate that “....downsizing for competitive reasons may enhance the usefulness of Internal Audit....Internal Audit may need more than ever, to check on the maintenance of controls in the wake of competitive pressures and reduced resources.”

Xiangdong (1997) used the agency theory to explain the role internal audit plays in an economy and posits that internal audit has an advantage over external audit in obtaining information faster than external audit and also in finding problems at an earlier stage.

Agency theory provides a distinctive, realistic and empirically testable perspective on problems of cooperative effort (Eisenhardt, 1989). Thus, this study intended to determine how agency theory in internal audit can be able to predict the extent of involvement of internal audit in monitoring strategic risk. This extends on the proposition by Adams (1994), on how agency theory can help in explaining the particular approach that internal auditors take to their work and more particularly their involvement in assessing strategic risks of the organization.

2.6 Conclusion

The argument thus will be whether the public sector internal auditors will be able to transform themselves and be co-pilots with the executive management in steering the organization to the intended destination, while at the same time maintaining their independence in evaluating the strategic risk.

It should however be clear that internal audit should not be involved in setting and executing strategy, but rather play a role in ensuring the processes used meet the desired objectives of the strategic direction of the organization as much as possible.

This research examines whether public sector internal audit has shifted its culture from being policy oriented to that which builds up the value of the enterprise by demonstrating effective and efficient service delivery through strategic risk assessment.

2.7 Chapter Summary

This chapter examines the operations of state corporations and how strategic risk plays an important role in their continued existence and subsequently their overall performance. It further demonstrates the gap that needs attention by probing extant literature on the involvement of internal audit using the agency theory in assessing strategic risk and the value therein of this role to public enterprises

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter deliberates on the research methodology that will be used to undertake the research. It discusses the research design, the population of the study, data collection methods, and data analysis as well as the data presentation methods that will be used in the examination. For purposes of this research study, a quantitative descriptive study was conducted to ascertain; the determinants of internal audit that are considered in the audit of strategic risk of state corporations, and to identify the extent of internal audit in the audit of strategic risk in state corporations.

3.2 Research Design

The structure of the research problem, the framework, organization or configuration of the relationships among variables of a study is expressed in the research design. It additionally gives the plan of investigation that was used to obtain empirical evidence on the said relationships (Cooper & Schindler, 2011). Bryman and Bell (2007) proposes that the choice of research design reflects the decision about the priority that has been given credence to a range of dimensions of the research process. The selection of a good research design, in addition, should be guided by an overarching consideration, in particular whether the design will be able to provide the best answers to the research questions (Polit & Beck, 2004; Wood & Haber, 2010).

To achieve the set research objectives and address the research problem, a quantitative research approach was employed. Quantitative research generates quantifiable data. It is highly structured, and the results enabled the researcher to examine the precise concepts and issues that are key to the study (Bryman & Bell, 2007), and further establish the strength of the relationship between variables mainly through statistical tests. Cooper and Schindler (2008), elucidate that quantitative research investigates phenomena that require precise measurement and quantification, and require a controlled and rigorous design. They further state that a quantitative design tends to be structured, which enhances objectivity. The characteristics of this study are in line with the quantitative paradigm. External validity was enhanced by the researcher by exercising control.

The research design that was used in the study was a non-experimental, multivariate, and descriptive survey design. The descriptive design was preferred as it had a high degree of representation and the simplicity by which the researcher got the respondents' views (Polit & Beck, 2004). The opinion of the participants was obtained and described by the researcher with regard to the determinants of internal audit that are considered in the audit of strategic risk of state corporations; and the extent by which internal auditors audit strategic risk of state corporations. Given that little has been documented in the country on this area of study, then the descriptive design was applied.

Multivariate analysis on the other hand was preferred as it is designed to allow researchers to include a variety of variables in one analysis and evaluate the contribution of each of the variables separately within the overall model (Smith, Thorpe, & Jackson, 2008). The variables identified in the study were each examined individually, and their overall contribution to the audit of strategic risk was assessed.

3.3 Population

The main aim of the study was to study the determinants of internal audit in the audit of strategic risks in state corporations. This was derived from the objectives of the study, and hence, the internal auditors of state corporations were the respondents of the study. The study therefore, examined how the determinants of internal audit units of the state corporations were able to harness their position in the corporations in monitoring the exposures that state enterprises encounter in pursuit of their strategic objectives.

The total collection of the elements from which inference was made defines the population of the study (Cooper & Schindler, 2008). For the purposes of this research, the population was the state corporations in Kenya.

Table 1 Population of the Study

Functional Categories	Population Size	Percentages
Non Commercial	148	83.1
Commercial	30	16.9
Total	178	100.0

State Corporations Performance Report 2010/2011

3.4 Data Collection Method

To be able to determine the extent by which internal auditors audit strategic risk of state corporations and the determinants of internal audit that are considered in the audit of strategic risk of state corporations, an email based questionnaire (see appendix 2) was used to collect data (Kiesler & Sproull, 1986). This had the advantage of quick distribution and response cycles (Swoboda, Muehelberger, Weitkunat, & Schneeweiss, 1997; Yun & Trumbo, 2000). It also afforded the technical ability to track whether the delivered questionnaire was opened, responded to, deleted, or was not delivered (Paolo, Bonamino, Gibson, Patridge & Kallail, 2000). In situations where the email based questionnaires were not applicable then a hard copy of the questionnaire was provided to the respondents.

The questionnaire was prepared in accordance with quality control requirements for questionnaire design (Dillman, 2000; Oppenheim, 1992; Preece, Rogers, & Sharp, 2002). This included the development of questionnaire scales, multiple choice answers, minimization of question bias through proper wording, confidentiality requirements, and the use of unambiguous and concise language. The same was extended to pretesting, which was done to ensure question completeness, efficiency and relevance and format appropriateness. It was pre-tested on a number of Heads of internal audit before distribution.

Questionnaires were emailed to 152 organizations while the remaining 26 were mailed through the post office based on the listing of the performance contracting department for public agencies. There was immense assistance from the members of the internal

audit profession in the distribution of the questionnaires. Each organization received one questionnaire for the head of internal audit dealing with both the dependent and independent variables. The data collection process took close to four months, with several reminders sent to the respondents. At the end of the collection process there were 98 organizations who had responded to the questionnaires. This was a response rate of 55% for which 35 of the organizations did not have an internal audit function.

3.5 Data Analysis

The data obtained from the questionnaire was used for descriptive analysis, and to examine the relationships and differences of the variables used to determine the determinants of internal audit in audit of strategic risks, through the use of multiple regression analysis which addressed the objectives of the study.

Multiple regression analysis was used in the study. The single dependent variable was the audit of strategic risk and a set of predictor variables which are defined in the model were the independent variables. The analysis was thus preferred (Smith et al., 2008). The data was tested to ensure that it demonstrates the assumptions of multiple regression. Normality, linearity and homoscedasticity were examined from the residuals scatterplots which were produced as part of the multiple regression technique. In addition normality was assessed by obtaining the skewness and kurtosis values.

The relationship between the variables that were used to measure the determinants of internal audit and audit of strategic risks were analysed through the use of Pearson's r that gave the relative strength of the variables and the direction of the relationship as well (Bryman & Bell, 2007). To test for the use of the Pearson in ascertaining the strength of the variables, normality of the variables was first checked to confirm a normal distribution. The variables displayed a normal distribution and also exhibited linearity, hence satisfying the assumption of the use of a parametric test, in this case Pearson's r .

To compare the different variables, the standardized coefficient was used. This is preferred as the values of each of the different variables have been converted to the same scale making it possible to do a comparison (Pallant, 2007).

Examination through the use of tolerance was used to diagnose whether multicollinearity exists (Albright, Winston & Zappe, 2009). Where if a low tolerance value is accompanied by large standard errors and non-significance, then multicollinearity was an issue. Correspondingly, the variance inflation factor measures the impact of collinearity among the variables in the regression model, and more of it shows presence of multicollinearity (Albright et al., 2009). In addition, a high correlation between the exploratory variables also indicates the problem (Keller, 2001). To deal with multicollinearity, where two independent variables are highly correlated (Cooper & Schindler, 2011), the researcher considered the entire population of the state corporations which reduced standard errors. The correlations between the variables and taking into account the importance of the variables provided guidelines in making the decisions on which variables to drop from the model, in case they were not essential to the model (Cooper & Schindler, 2011). In addition, the variables were centered by computing the mean of each independent variable, and then replacing each value with the difference between it and the mean (Keller, 2001).

The mean indicated the extent of involvement of internal auditors in audit of strategic risk, which was compared with the means derived from the various attributes that determine their consideration in auditing strategic risk. This then enabled the study of the relation between the various attributes of internal audit involvement in strategic risk, with effectiveness in doing so.

3.5.1 Measurement of Variables

The model to be tested was as follows:

$$AS = b_0 + b_1 BP + b_2 MS + b_3 RS + b_4 RM + b_5 IAS + e$$

Where:

AS = Audit of strategic risk by internal auditors, which was the dependent variable. The dependent variable was measured by the perceptions of the internal auditors in the audit of strategic risk along the following factors: how the internal audit is aligned with the strategic direction of the organization, whether assessment of strategic risk is part of

internal audit mission, the capability to identify and assess strategic risk creates value to the organization and the availability of a process to identify strategic risk in the internal audit function. These were then measured through a five point Likert-type item. Here, 1 corresponds to strongly agreeing with the factors and 5 corresponds to strongly disagreeing with the mentioned variables.

The independent variables were measured as follows;

BP = proportion of the total internal audit budget that has been allocated to strategic risk. This was measured in percentages. The proportion of the budget was compared to other risks (organizational and financial) and the resources that the internal audit devotes to particular activities within its function. This was to test hypothesis 3.

MS = management support in the operations of the audit function. To test hypothesis 2, the perception of management on the function of internal audit was measured. This was examined in the following parameters: whether management perceives internal audit as value adding, the extent of implementation of internal audit recommendations by management, participation of internal audit in review of the strategic plan with management, and the support that management provides for training and development of internal audit staff. These were then measured through a five point Likert-type item. Here, 1 corresponds to strongly agreeing with the factors and 5 corresponds to strongly disagreeing with the mentioned variables.

RS = reporting structure of the audit function in the organization, between the senior management or the audit committee of the board. The organizational setting and thus the independence of the internal audit function is measured. The variables being examined include; the reporting structure of the internal audit function, the approval of the internal audit budget, the appointment, dismissal, evaluation of the head of internal audit and the person who is responsible for administering the internal audit function. The independence will be scored based on whom the function will report to, with 1 being the ideal situation and 5 being the least. This was to test for hypothesis 1.

IAS = Internal auditors with internal audit skills and audit experience. To test for hypothesis 5, the following were explored; the internal audit skills in identifying and assessing strategic risks, experience to audit public sector organizations and participation of the internal audit staff in training and development programmes. It is then measured in a Likert scale where 1 corresponds to the internal auditor strongly agreeing to the assertions and 5 corresponds to the internal auditor strongly disagreeing.

RM = Presence of a Risk Management Unit. This measured based on whether the organization has a risk management unit or not. This is a dummy variable given the value of 1 where a risk management unit exists and 0 otherwise.

The independent variables defined were used to determine the determinants of internal audit in audit of strategic risk. The control variable was the classification of the state corporations into commercial and non-commercial corporations.

3.6 Research Quality

To ensure validity of the questionnaire that was used to measure the research questions, content validity, criterion-related validity, and construct validity were considered (Cooper & Schindler, 2008). This confirmed that what the researcher found with the questionnaire actually represented the reality of what was to be measured (Saunders, Lewis & Thornhill, 2009). For content validity panels of individuals were used to assess whether each measurement question in the questionnaire was 'essential', 'useful but not essential', or 'not necessary'. To assess criterion validity, the data in the questionnaire was compared with that specified in the criteria which were undertaken using statistical analysis such as correlation. For construct validity, the question was how well the researcher was able to generalize the measurement questions to the constructs that were to be measured.

Reliability of the data collection method was tested by comparing the data collected with other data from a variety of sources such as from the literature reviewed.

3.7 Ethical Considerations

The ethical considerations were on the privacy of the participants, which was upheld and was not to be involved in anything within the research that would cause harm or invade their privacy where it went beyond the scope agreed. Another aspect is that the researcher ensured that the aims of the research project once completed would be shared with the intended participants (Zikmund, 2000). Objectivity in collection of the data was also observed. Confidentiality and anonymity was maintained throughout the period of collection and analysis of the data.

CHAPTER 4: PRESENTATION OF RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings on the extent and determinants of internal audit in the audit of strategic risk of state corporations in Kenya and also reflects on linkages with other related studies.

The chapter initially addresses analysis of the respondents from the questionnaires administered. The objective on the determinants of internal audit used in the audit of strategic risk are addressed by sections 4.4.2 to 4.4.6 and discussed by tables 4.3 to 4.21. The other objective that seeks to determine the extent of by which internal auditors audit strategic risk are answered by sections 4.4.1.

4.2 Response Rate

There was a response rate of 55% of the target population of 178 state corporations. 35 of these corporations do not have an internal audit function. This implies that 143 state corporations have internal audit units 98 of these responded thus placing the response rate at 69%. The effect of this response rate is that it represented a significant number of those surveyed and hence the risk of bias was reduced. This is supported by the findings of Mangione (1995) who has provided the following classification of bands of response rates to questionnaires:

Table 2 Response Rate Classification

Over 85%	70-85%	60-69%	50-59%	Below 50%
Excellent	Very good	Acceptable	Barely acceptable	Not acceptable

Mugenda and Mugenda (2003) also provides an almost similar response to the generalization of the response rate as follows; 50% being adequate for analysis and reporting, 60% being good and 70% as excellent.

The analysis of the findings of the study can thus be said to be acceptable with respect to the population of the study.

4.3 Findings on Tenure of Organization and Internal Audit Function

This study recognized general information of the respondents which formed the basis under which the research obtained the relevant information. This information was relied on so as to classify the different outcomes based on the years that the organization has been in existence and the age of the internal audit function as well.

Note: N = 98

Table 3 Number of Years the Organization has been in Existence

No. Of Years	Frequency	Percentage
1 – 2 years	3	3.1
3 – 4 years	5	5.1
4 – 8 years	9	9.2
More than 9 years	81	82.7

The analysis indicates that 81% of the respondents are in organizations that are more than 9 years old, while only 3% are between 1 to 2 years. This is also reflected in the tenure of the internal audit unit as depicted in figure 4.2, where 53% of the respondents are in organizations whose internal audit unit is more than 9 years, and followed by those which are between 4 to 8 years at 24%.

Table 4 Tenure of Internal Audit Function

No. of Years	Frequency	Percentage
Less than 1 year	2	2.0
1 – 2 years	5	5.1
3 – 4 years	16	16.3
4 – 8 years	23	23.5
More than 9 years	51	52.0

The information provided by the tables 3 and 4 assisted the researcher to ascertain how the age of the organization and the internal audit function influenced the assessment and audit of strategic risks by the internal auditors of the respective organizations. There was however no notable differences that emerged from the categories of the respondents.

4.4 Descriptive Statistics

Descriptive statistics provided information on assessment and audit of strategic risk and the determinants of internal audit effectiveness on the resources allocated for strategic risk assessment, planning and audit, internal auditors skills, management support of internal audit activities, presence of a risk management unit and the independence of the internal audit function. The Likert scale was used to capture the respondents' feelings with respect to assessment and audit of strategic risk, internal auditors' skills, management support of internal audit function and independence of the internal audit function. The overall mean calculated represents the importance of the independent variable to audit and assessment of strategic risk.

4.4.1 Assessment and Audit of Strategic Risk

Almost 72% of the respondents agreed that assessment of strategic risk is part of internal audit mission. This had a mean score of 2.19, which shows that the respondents somewhat agreed that audit of strategic risk is part of internal audit mission.

Internal audit ability to identify and assess strategic risk was believed to create value by 65% of the respondents. The mean value obtained from the assessment of strategic risk

creates value was 2.22, which implies the respondents somewhat agree that their ability to identify and assess strategic risk creates value.

The respondents who agreed that there is a process of strategic risk assessment in the internal audit unit were 56%. This has a mean of 2.38 indicating that the respondents somewhat agreed there is a process of strategic risk identification in internal audit.

About 60% of the respondents agreed that internal audit was aligned to the strategic direction of the organization. This has a mean value of 2.28, implying that the respondents somewhat agreed that internal audit is aligned with the strategic direction of the organization.

These are summarized in table 5

Table 5 Assessment and Audit of Strategic Risk

	Strongly agree	Somewhat agree	Neither agree nor disagree	Strongly disagree
Assessment of strategic risk is part of Internal Audit Mission	13.3%	58.2%	25.5%	2.0%
Internal Auditor's ability to identify and assess strategic risk creates value	14.3%	51%	30.6%	3.1%
There is a process of strategic risk identification in internal audit	10.2%	45.9%	38.8%	4.1%
Internal audit is aligned to the strategic direction of the organization	13.3	46.9	36.7	2.0

The overall mean of audit and assessment of strategic risk was 2.0, which implies that internal auditors of state corporations somehow agree that assessment and audit strategic

risk is part of internal auditors function in state corporations in Kenya. This provides a strong support for hypothesis 1.

4.4.2 Resources Allocated to Risks

This research sought to establish the percentage of resources allocated to the assessment and audit of strategic risk compared to financial and organizational risk to the overall audit and assessment of strategic risk by internal auditors of state corporations in Kenya. Financial risk still appears to be the one that internal audit allocates most of the resources at 57%, while operational risk and strategic risk are at 23% and 20% respectively, with a mean of 20% where the minimum was 5% and maximum 50%. The comparative percentages are as shown in figure 4.2.

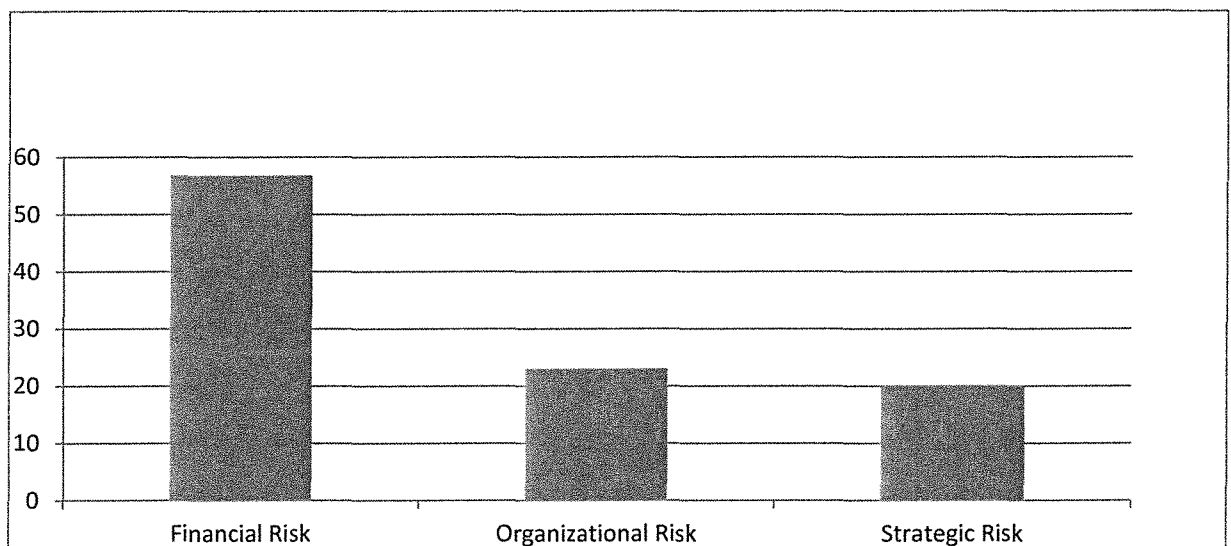


Figure 4.2: Percentage of Resources used in Key Risk Areas by Internal Audit

Organizations with an internal audit unit that is more than 9 years old allocated more resources to the assessment and audit of strategic risk, in comparison to those that were less than 9 years old, indicating that the tenure of the audit unit plays a role in the assessment of strategic risk. This is shown in figure 4.3.

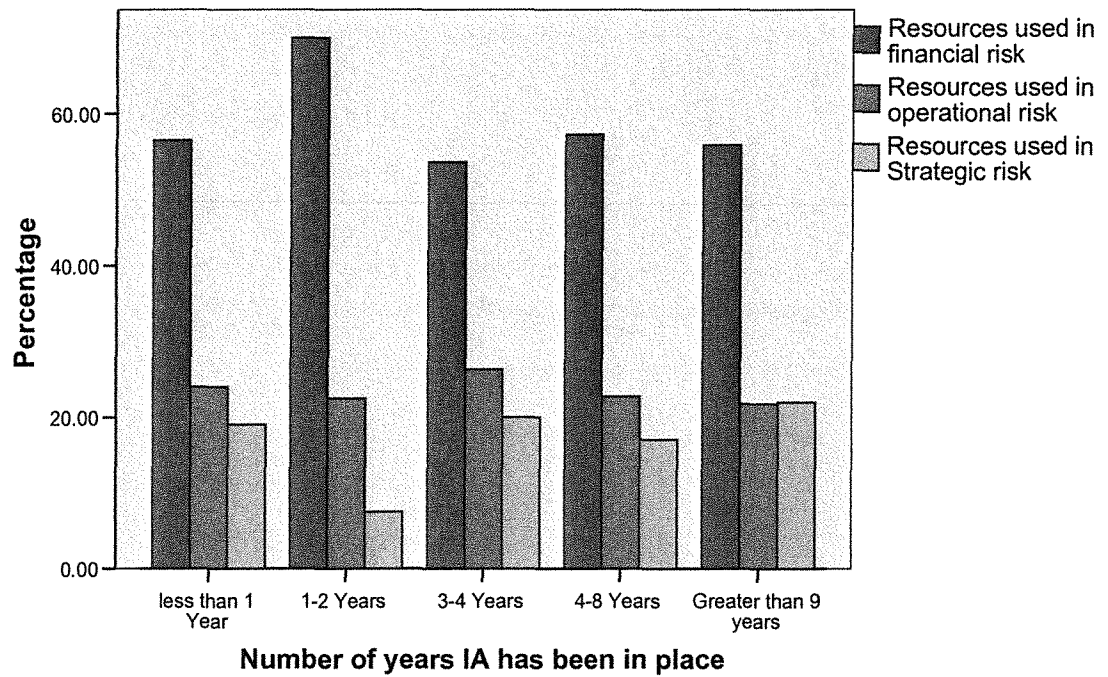


Figure 4.3: Tenure of Internal Audit to Allocation of Resources to Strategic Risks in the Organization

Interestingly, most of the strategic risk resources were allocated to organizations in the functional category of regional development authority at 23%, regulatory at 21%, training and research at 20%, commercial/manufacturing at 20%, and financial at 13%.

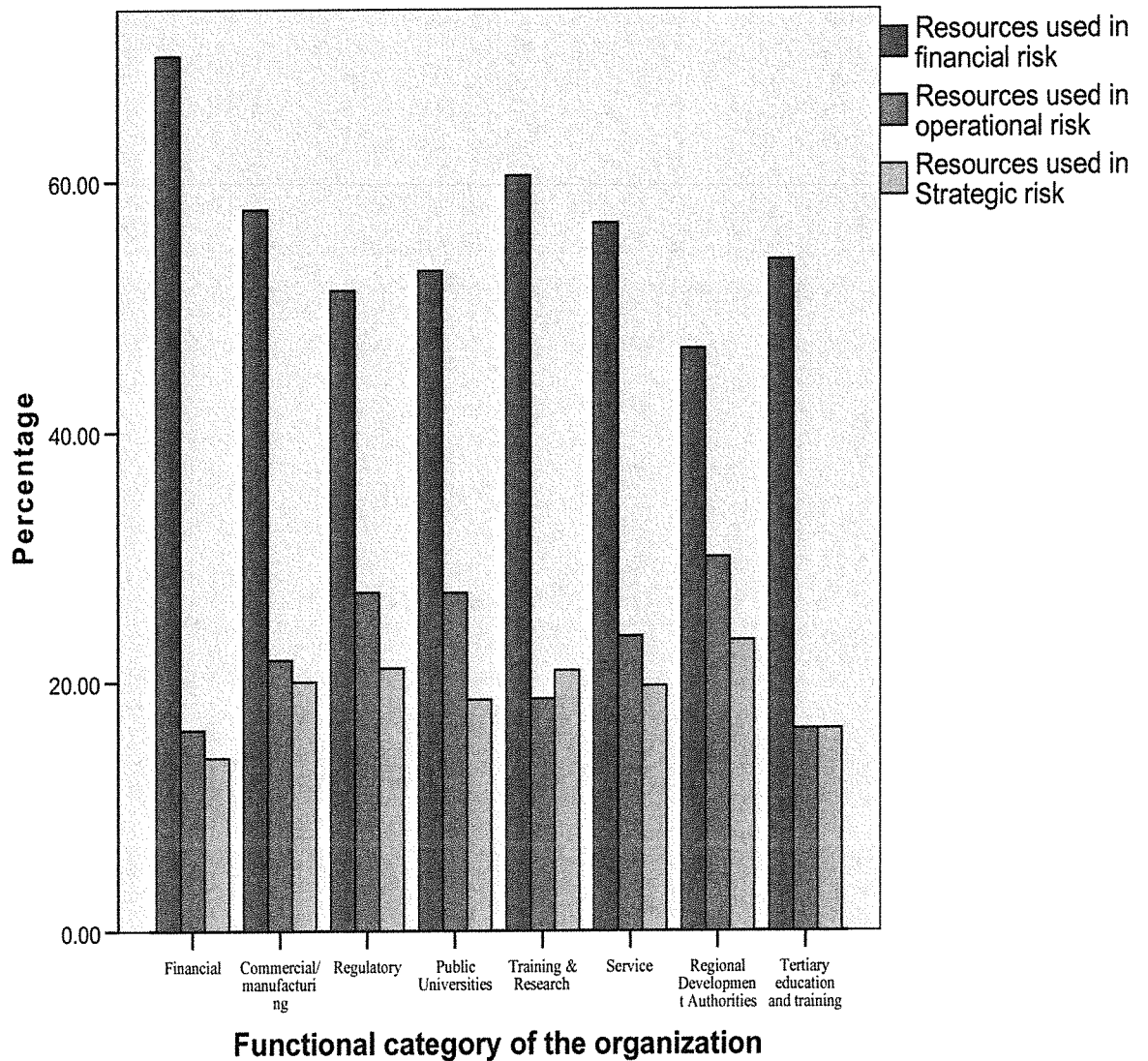


Figure 4.4: Functional Category to Resource Allocation

The services category dedicated most of the total available resources to strategic risk assessment and planning at 17% compared to the other categories. This is closely followed by tertiary, training & researches both at 13%. This is higher than that of the commercial/manufacturing at 10%, and regulatory at 12% which had allocated a comparatively higher percentage of resources directly to strategic risk assessment. This

could be as a result of the existence of a risk management unit in the respective categories.

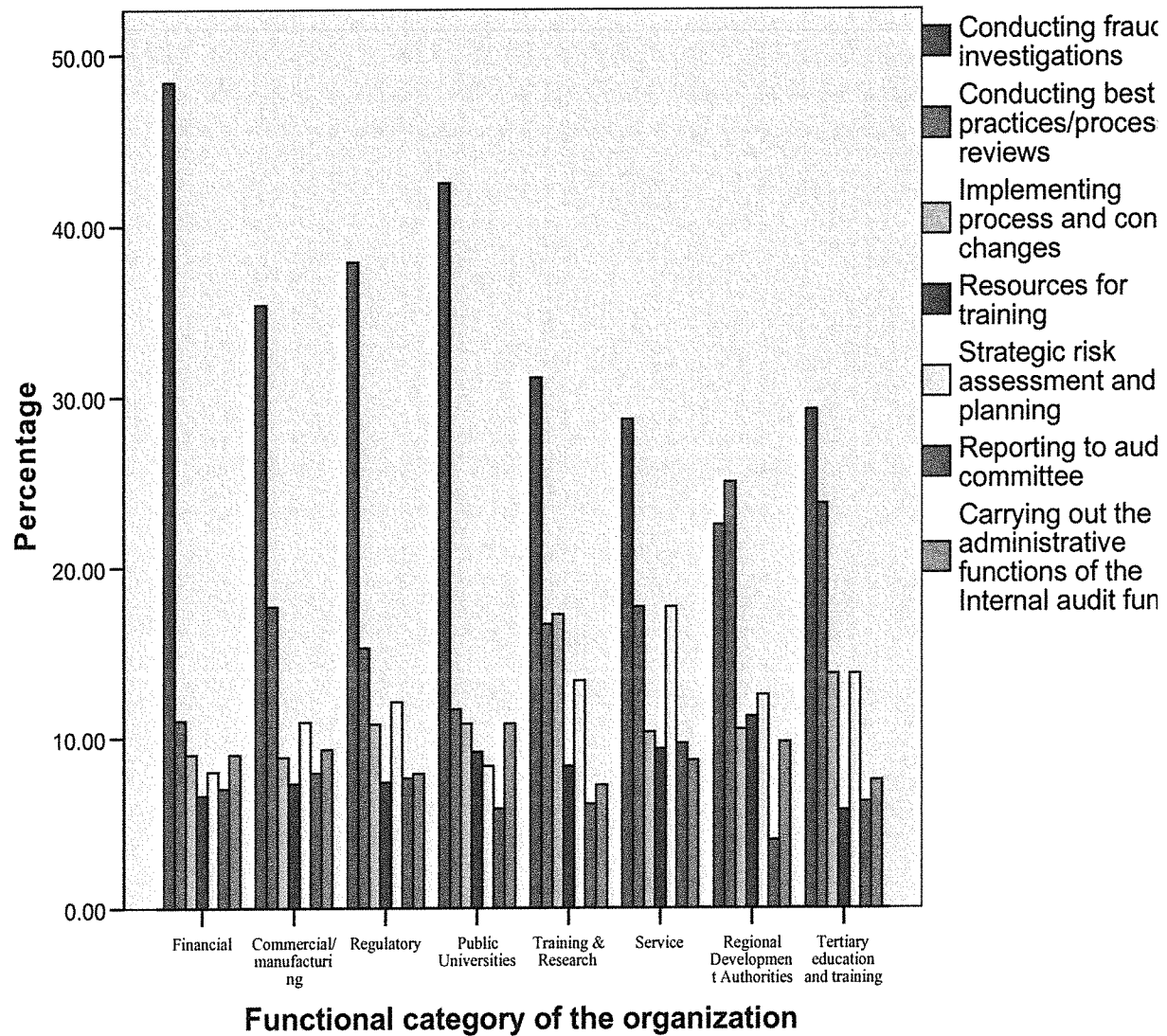


Figure 4.5: Functional Category to Overall Resources Allocated to Internal Audit Activities

The findings indicate that risks associated with finance are allocated the most resources, though there is still some consideration that is given to strategic risk for all the functional categories of the state corporations.

4.4.3 Existence of a Risks Management Unit

The research established the existence of a risk management unit to the functional categories of the state corporations in Kenya. The results are as shown in figure 4.6.

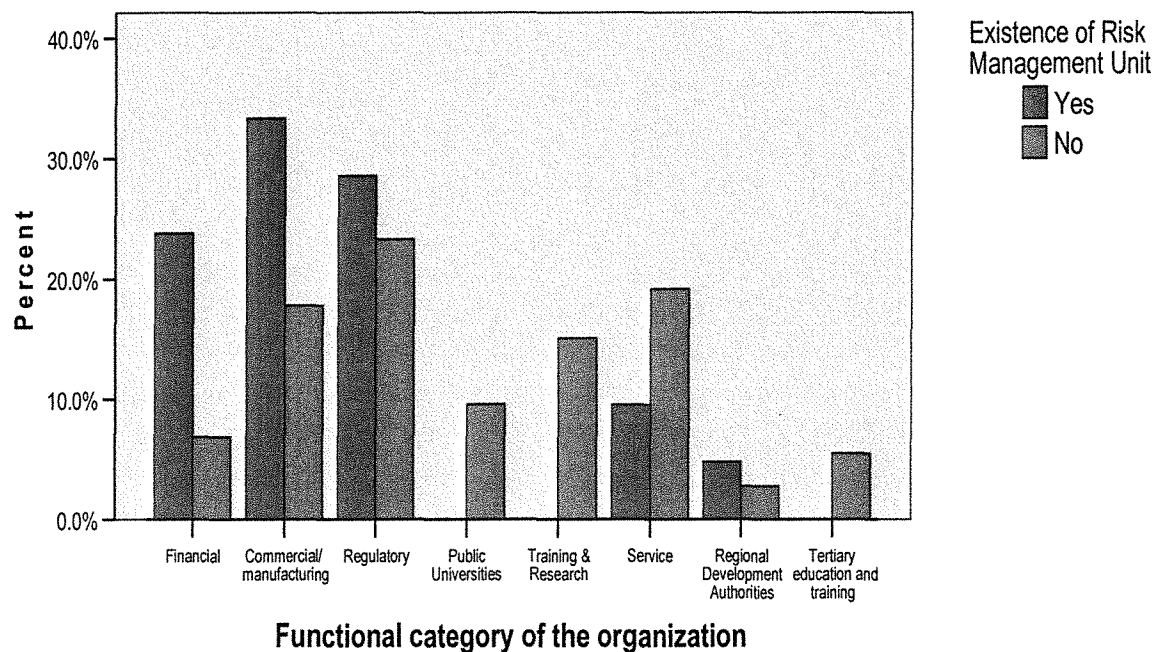


Figure 4.6: Existence of Risk Management Unit Based on Functional Category

The existence of a risk management unit was prevalent in the functional category of commercial/manufacturing of the organization at 33%, followed by regulatory at 29% and financial at 24%. The categories involved in research and education did not have a risk management unit. This implies that the nature of operations of the organization could have an effect in the existence of a risk management unit.

4.4.4 Internal Audit Skills and Experience

The research sought to establish how internal auditor skills and experience relates to the assessment and audit of strategic risk in state corporations in Kenya. The findings are as shown in table 6.

Table 6 Internal Auditors' Skills

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Internal auditor's skills to identify and assess strategic risk	13.3%	59.2%	23.5%	3.1%	1.0%
Internal audit experience in auditing public sector	61.2%	34.7%	2.0%	2.0%	0

About 73% of the respondents agreed that internal auditors in their organization have skills to identify and assess strategic risk. This had a mean score of 2.19, which indicates that the respondents somewhat agree that they have skills to identify and assess strategic risk.

The respondents' who agreed that they had experience in audit of public sector organizations was 96%. This had a mean score of 1.47 meaning that they strongly agreed that they had experience to audit in the public sector.

The results indicate that a substantial number of internal auditors have the skills to audit and assess strategic risk and also have the experience to audit public sector organizations, hence having a positive impact on the assessment and audit of strategic risk.

4.4.5 Management Support of Internal Audit Function

The research sought to establish management support to the internal audit function with regard to the audit and assessment of strategic risk and assessment in state corporations in Kenya. The results are shown in table 7.

Table 7 Perception of Management in Internal Auditing as Value Adding

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Management view of internal audit as value adding	10.2%	49%	40.8%	0	0
Implementation of internal audit recommendations	6.1%	65.3%	27.6%	0	0
Participation of internal audit in review of strategic plan	10.2%	30.6%	49%	9.2%	1%
Management not providing support to internal audit training and development	2%	20.4%	19.4%	46.9%	10.2%

The respondents who agreed that management view internal audit as value adding to the organization were 59%, while 41% of the respondents were however not certain whether it does or does not. The overall mean score was 2.3, which means that the respondents were not sure whether management view internal audit as value adding.

About 71% of the respondents agreed that management implements internal audit recommendations, which shows that they support the work that the internal audit unit does. This had a mean score of 2.2 indicating the respondents somewhat agree that management implements the recommendations of internal audit.

The respondents who were not sure whether internal audit participates in the review of the strategic plan with management were 49%, while 41% somewhat agreed that they do so, while 1% strongly disagreed. The mean score of the respondents was 2.6. This shows that the respondents were not sure whether they participate in the review of the strategic plan with management.

About 57% of the respondents disagreed that management does not provide enough support for training and development of internal audit staff with a mean score of 3.4. This shows that the respondents believed that management provided support for their training and development.

The analyses indicate that management supports the functions of the internal audit with a mean score of 2.

4.4.6 Internal Audit Independence

The study sought to establish internal audit independence to the assessment and audit of strategic risk in state corporations in Kenya. The results are as shown in tables 8

Almost 83% of the respondents indicated that they reported to the audit committee of the board. This shows that there is independence in the functioning of the internal audit unit.

Table 8 Internal Audit Independence

	Board of Directors	Chief Executive Officer	Audit committee	Chief Finance Officer	Internal Audit	Others
Internal audit reporting	4.1%	11.2%	82.7%			
Approval of the internal audit budget	16.3%	28.6%	45.9%	6.1%		1%
Appointment, evaluation and dismissal of the internal audit manager	25.5%	41.8%	32.7%			
Administration of the internal audit budget		1.0%	9.2%	11.2%	78.6%	

Internal audit budget is mostly approved by the audit committee of the board as demonstrated by the respondents at 46%, while 29% indicated that the chief executive approves the internal audit budget as shown in table 4.7 indicating independence in the operations of the audit office.

About 42% of the respondents indicated that appointment and dismissal of the internal audit is done by the chief executive officer, 33% by the audit committee of the board, and 26% by the board of directors as shown in table 8. This has a negative effect on the independence of the internal audit function.

The administration of the internal audit budget is mostly done by the head of internal audit as indicated by 79% of the respondents, while 11% by the chief finance officer as shown in table 8. This gives the internal audit the autonomy that it requires to function

4.5 Additional findings on the determinants of internal audit effectiveness

4.5.1 Listing in the Nairobi Securities Exchange (NSE)

The findings in figure 4.7 show that the organizations that are listed in the Nairobi Securities Exchange allocated more resources to strategic risk assessment at 21.25% and 19.53% respectively. The difference in the allocation was also not significant for the other risks in the organization, with financial risk having 57.5% and 56.42%, operational risk at 21.25% and 23.29% respectively. The findings indicate that there is no significant effect in the resource allocation of the risk areas of the organization based on whether it is listed in the bourse or not.

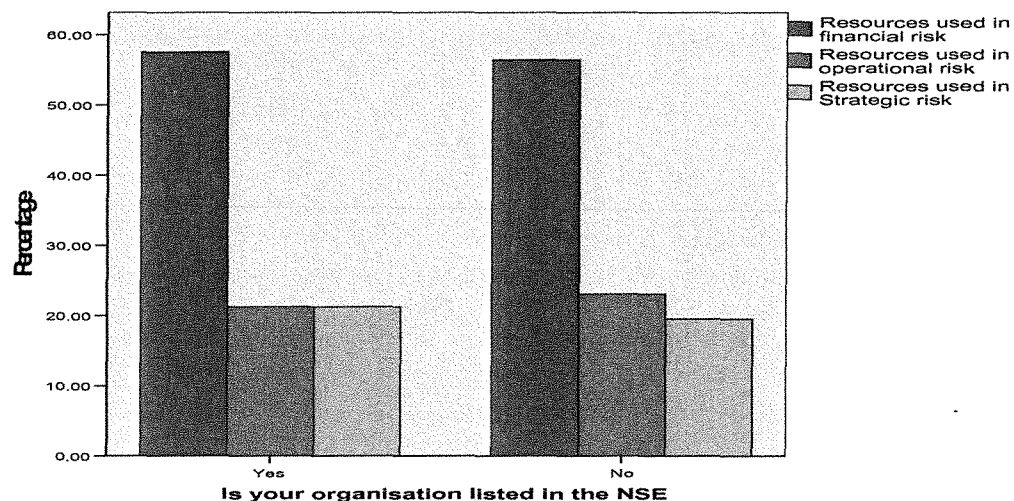


Figure 4.7: Resources and Listing in the Nairobi Securities Exchange

4.5.2 Involvement in determining Internal Audit Plan

The research established the involvement of management and directors in the determination of the internal audit plan to the assessment and audit of strategic risk in state corporations in Kenya. The results are as presented in tables 9.

While examining the extent to which management and the directors are involved in determining the internal audit plan, 83.5% of the heads of internal audit were fully involved, 54.6% of the audit committee of the board of directors were somewhat involved, 54% of the Chief Executive Officers were somewhat involved, 43% of the finance directors were somewhat involved, and 42% of the operations line management were somewhat involved. This shows that management provides input to the internal audit plan process.

Table 9 Involvement of Determining Internal Audit Plan

	Not involved at all	Neither involved nor fully involved	Somewhat involved	Fully involved
Involvement of internal audit in determining the audit plan	0	3.1%	13.3%	82.7%
Involvement of audit committee in determining the audit plan	3.1%	19.4%	54.1%	22.4%
Involvement of chief executive in determining the audit plan	2.0%	7.1%	29.6%	53.1%
Involvement of finance director in determining the audit plan	6.1%	10.2%	35.7%	41.8%
Involvement of operations line management in determining the audit plan	7.1%	8.2%	39.8%	40.8%

The findings indicate that there is greater involvement among the key stakeholders in the input of the internal audit plan. This ensures that the internal auditor will focus on key business risk areas identified by the business owners, which may lead to effective audit of strategic areas of the business.

4.6 Regression analysis

The study sought to also examine the relationship between the determinants of internal audit and the audit of strategic risk in state corporations in Kenya. Multiple regression was used in the research to determine the extent of the relationship.

4.6.1 Multicollinearity

Multicollinearity was diagnosed through the use of tolerance factor (Albright, Wilson & Zappe, 2009). If a low tolerance value of less than 0.1 is accompanied by large standard

errors and non-significance then multicollinearity may be an issue (Pallant, 2007). The results of multicollinearity are as shown in table 10

Table 10 Multicollinearity

Independent Variables	Collinearity Statistics
	Tolerance
Internal Audit Skills	.733
Independence of the internal audit function	.848
Management Support	.748
Resources allocated to strategic risk	.897
Existence of risk management unit	.868

From the results shown in table 10, the tolerance value for the independent variables varied between 0.733 to 0.897, which are not less than 0.10; thus the multicollinearity assumption has not been violated.

4.7 Pearson correlation results

The research used Pearson correlation to measure the degree of association between the different variables under the study (Bryman et al., 2007). The results are as presented in Table 11

Table 11 Pearson Correlation Statistics

	Audit of Strategic Risk	Internal Audit Skills	Participation of IA Plan	Independence of IA	Management support	Resources allocated to strategic risk assessment	Existence of Risk Management Unit	Number of staff with the relevant professional experience
Audit of Strategic Risk	1	.329** .001	-.052 .611	.338** .001	.486** .000	.313** .002	.379** .000	-.089 .384
Internal Audit Skills	.329** .001	1	.107 .292	.264** .009	.475** .000	.169 .097	.250* .013	.045 .660
Independence of IA	.338** .001	.264** .009	.104 .309	1	.194 .055	.265** .008	.270** .007	.140 .170
Management support	.486** .000	.475** .000	.128 .208	.194 .055	1	.193 .057	.244* .016	-.041 .689
Resources allocated to strategic risk assessment	.313** .002	.169 .097	-.069 .503	.265** .008	.193 .057	1	.196 .053	.057 .575
Existence of Risk Management Unit	.379** .000	.250* .013	-.177 .082	.270** .007	.244* .016	.196 .053	1	-.154 .130
Number of staff with the relevant professional experience	-.089 .384	.045 .660	.065 .527	.140 .170	-.041 .689	.057 .575	-.154 .130	1

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

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

Saunders et al (2009, pp.363) provides the guidelines of the strength of the relationship as follows;

Table 12 Values of the Correlation Coefficient

Strength	Value	Strength	Value
Perfect negative	-1	Weak positive	+0.3
Strong negative	-0.7	Strong positive	+0.7
Weak negative	-0.3	Perfect positive	+1
Perfect independence	0		

The relationship between determinants of internal audit effectiveness and audit of strategic risk is discussed.

4.7.1: The relationship between audit of strategic risk and internal audit skills

The relationship between audit of strategic risk and internal audit skills indicated a weak positive correlation between the two variables, as shown in table 11 where $r = 0.329$, $n = 98$. This provides support for hypothesis 4. The studies done propose that the competency of the internal audit function determines the quality of internal audit involvement in strategic risk (Zain et al., 2006; Gramling et al., 2009). The findings of the research draw an almost similar position. It, however, does not support the research by Gramling et al. (1997) which posits that certification of internal audit is perceived to be a significant level of competence. There was a weak negative correlation of 0.089 that was established between audit of strategic risk and the certification of internal auditors. This therefore implies that in as far as internal audit competency is concerned in the audit of strategic risk then experience and skills have a greater influence than certification.

4.7.2: The relationship between audit of strategic risk and independence of internal audit function

Independence of the internal audit function is important to the effective operation of internal audit (Mihret & Yismaw, 2007). This has been supported by studies done by Glasscock (2002). The results obtained as shown in table 11 provide a weak positive correlation between the two variables which is $r = 0.338$, $n = 98$ which supports hypothesis 1. The findings concur with studies that have been done in the organizational setting of the internal audit function. In a study by Christopher et al. (2009) where the chief executive or the chief finance officer approve the internal audit budget, the head of internal audit does not report functionally to the audit committee of the board, the audit committee does not have the mandate to hire, dismiss or evaluate the internal audit manager are threats to the internal audit function. The strong positive relationship drawn between the association between audit committees' oversight of internal audit function and nature of internal audit activities (Abbot et al., 2010) has also been replicated in this study. The findings thus indicated that most of the internal audit functions in state corporations are properly set up.

4.7.3: The relationship between audit of strategic risk and management support

The results indicate that this relationship, as compared to the other variables, was the strongest at 0.486 as shown in table 11, providing a strong support for hypothesis 2. This supports the findings by Sarens and DeBeelde (2006) and Mihret & Yismaw (2007) and shows that management support plays a key role in enabling the internal auditors assess and audit strategic risk in the respective state corporations. This could be explained by the fact that strategic risk requires the involvement of the management team for it to be effective as it cuts across all the business units of the organization. In addition a study by Van Gansberghe (2005) demonstrated the extent to which management implements internal audit function determines its effectiveness, as was also reflected in this study.

4.7.4: The relationship between audit of strategic risk and proportion of budget allocated to strategic risk.

The strength of the relationship for the variables of concern was a weak positive correlation as shown in table 11 as $r = 0.313$, $n=98$, providing a weak support for hypothesis 3. The study done by Abbot et al. (2010) documented a strong positive

relationship between the budget allocated to internal audit function and its activities. This study concentrated on the specific resources that are allocated to the planning and assessment of strategic risks in comparison to those allocated to financial and organizational risks respectively. The findings mirrored those of Abbot et al. (2010), though the strength of the relationship was not as strong as envisaged.

4.7.5: The relationship between audit of strategic risk and existence of a risk management unit

The existence of a risk management unit also exhibited a weak positive relationship of 0.379 as shown in table 11. This shows that where there is a dedicated office that handles the risks of the organization, then the risk officers are likely to provide the input to internal audit on the areas that they are required to focus on in the audit strategic risk. This is because of the specialized skill that the risk managers will have, as has been supported hypothesis 5. These findings are consistent with the study done by Fraser and Henry (2004). However, there is no evidence of the two functions of risk management and internal audit being separate as predicted by Baker (2001), Lindow and Race (2002) and (Bolton (2000)). The two functions are closely related given the positive association, signifying that internal audit is complementary to other risk management mechanisms in the organization.

4.8 Regression Results

Multiple regression was used to address how well the determinants of internal audit are able to predict the audit of strategic risk by internal auditors of state corporations in Kenya. It was also used to check which of the determinants of internal audit variables demonstrates the best predictor of strategic risk.

To ascertain how much of the variance in the dependent variable (audit of strategic risk) was explained by the model that included the independent variables (determinants of internal audit), regression was done and the results presented in table 13.

Table 13 Model Summary Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.616	0.38	0.334	.55718

In this case, the value was 0.38, which implies that the model's independent variable (determinants of internal audit) explains 38% of the variance of audit of strategic risk by internal auditors of state corporations. The R^2 of the model is comparable to similar studies done on internal audit determinants. For instance, the reported R^2 is about 35% in Arena and Azzone (2009) and 36% in Mohammed et al. (2012). The reported R^2 of 38% indicates that there are other determinants that are useful in the audit of strategic risk (as 62% cannot be attributed to the studied determinants).

To determine which of the independent variables (determinants of internal audit) contributed to the prediction of the dependent variable (audit of strategic risk), the coefficients were determined and are provided in table 14.

Table 14 Evaluation of Independent Variables

Model	Standardized Coefficients	T	Sig.	95% Confidence Interval for B		Correlations		
	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)		-.519	.605	-.910	.533			
Internal Audit Skills	0.051	.411	.682	-.150	.228	.329	.043	.044
Independence of IA	0.161	1.786	.077	-.017	.325	.338	.183	.168
Management support	0.466	3.709	.000	.213	.704	.486	.361	.309
Resources allocated to strategic risk assessment	0.117	1.765	.081	-.015	.253	.313	.181	.153
Existence of Risk Management Unit	0.276	2.352	.021	.052	.617	.379	.238	.195

The beta values provided in table 14 were used to compare the contribution of each of the independent variables. For this case, the largest beta coefficient is 0.466 which is management support to the internal audit function activities. This means that it makes the greatest unique contribution to explaining the audit of strategic risk, when the variance for the other dependent variables in the model are controlled for. This was followed by the existence of a risk management unit at 0.276, independence of internal audit function at 0.161, resources allocated to strategic risk at 0.117, and the lowest being internal audit skills and experience at 0.051.

The variables that made the significant unique contribution to the equation were obtained from the significance column as provided in table 14. Pallant (2007, p.159) explains that if the Sig. value is less than 0.05, the variable is making a significant unique contribution to the prediction of the dependent variable (audit of strategic risk). In this case, the two independent variables were management support at .000 and existence of risk management unit at 0.021. For the other variables, the values are more than 0.05 and hence did not make a significant unique contribution to the prediction of audit of strategic risk.

To get the percentage of variance uniquely explained by the independent variables in the audit of strategic risk, the part correlation coefficients were used. These are provided in table 14. Internal audit skill is 0.044 indicating that it uniquely explains 0.1936% of the variance in audit of strategic risk, an insignificant figure. Management support is 0.309, which uniquely explains 9.55% of the variance in audit of strategic risk. Existence of risk management unit uniquely explains 2.3%, independence of internal audit 2.8% and resources allocated to strategic risk 2.02% respectively.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter highlights the conclusions and the recommendations based on the findings of the research. This study examined the determinants of internal audit in the audit of strategic risk. This was done by focusing on the key objectives of the study which were, to identify the determinants of internal audit considered in the audit of strategic risk and the extent by which internal auditors of state corporations audit strategic risk.

This chapter is structured as follows: the first section outlines the summary of the objectives of the research, the methodology that was used to study those objectives and the findings resulting from the study. Section 2 relates the conclusion of the research to those that were earlier done, which bear significant impact on the study and how it contributes to the findings. Section 4 discusses the implication of the research to the key stakeholders, section 5 presents the recommendations for further research, and finally the limitations of the study are outlined in section 6.

5.2 Summary of Research Objectives, Methods, and Findings

The research investigated the determinants of internal audit that are considered in the audit of strategic risk in state corporations in Kenya, and the extent by which internal auditors of state corporations audit strategic risk.. Strategic risk influences the performance of the organization, and hence, the interplay between the internal auditor and management in management determines the achievement of the organization's strategic objectives. The involvement of the internal auditor in strategic issues should then be reexamined to ensure that independence is still maintained, and at the same time, offering value to the organization from the audit of strategic risk.

The whole population of the study was considered to enhance the quality of the findings. To develop, test and improve the model, and hypotheses, questionnaires were developed based on the literature review and pre-test results. Most of the questions were answered using a five-point Likert-type scale. Audit of strategic risk was measured by questions about internal auditors' perception of key activities of the internal audit function relating to its mission on strategic risk. Pretesting of the questionnaires reduced the factors that

were used which could have made it difficult to find a model fitting the data. Closed questions were mostly used to avoid ambiguity during interpretation, to make the coding process easier, and to facilitate statistical analysis.

The findings from the 98 respondents show that strategic risk audit forms part of the internal audit function and that the determinants identified in the study influence how effective the audit will be. The determinants include internal audit independence, budget allocated to strategic risk activities, presence of a risk management unit, management support of the internal audit function, and skills and experience of the internal auditor.

The audit of strategic risk is largely influenced by the degree of management support in audit function activities. Management perceives the internal audit function as value adding, and internal audit recommendations are afforded enough attention. There was however indifference on the participation of the internal audit unit in the review of the organization's strategic plan with the management. This could be attributed to the independence issues likely to face the internal auditors as they participate in assessments.

Organizational setting enables effective internal audit of strategic risk. Most of the organizations demonstrated the independence of the function except for appointment, evaluation, and dismissal of the internal auditor, which was majorly done by the Chief Executive Officer. This undermines the effectiveness of the audit process.

Most of the internal audit resources are allocated to audit of financial risk, though there is still some provided towards audit of strategic risk. Organizations whose internal audit function was more than nine years old tended to allocate most of the resources towards to strategic risk assessment and planning. This indicates that the tenure of the internal audit unit plays a role in the distribution of resources in the internal audit unit. Organizations in the service industry also tended to allocate most resources to strategic risk compared to the other risks like financial and operational risks.

Existence of a risk management unit also influenced the audit of strategic risk, with organizations in the commercial/manufacturing industry having the most number.

Internal audit skills and experience also contributes to the audit of strategic risk by internal auditors of state corporations.

The determinants of internal audit are thus apparently significant in the audit of strategic risk by internal auditors.

5.3 Conclusion

This study investigated the internal audit service of state corporations, in order to identify the determinants of internal audit in the audit of strategic risk in state corporations in Kenya, using a model developed for the study. The model consisted of five interrelated factors: independence of the internal audit function; management support of the function; allocation of resources; existence of a risk management unit; and internal auditors experience and skills.

The findings reveal that strategic risk management is still an embryonic activity that requires both the board and management to embed in the respective roles they play in the organization. This confirms the findings of the study done by Mitchell (2010), Cooper and Faseruk (2011) and Anderson and Frigo (2011). Most of the internal audit functions according to the study have devoted most of their resources towards audit of financial risk and finance related activities, and are yet to move towards value-added roles like strategic risk audits. Internal audit functions should therefore consider in their plan the assessment and audit of strategic risk, given the importance strategic risk plays in the business and competitive strategy (Clarke & Varma, 1999).

In order to effectively do this role, the internal audit function has to consider the core determinants of internal audit. This study has indicated the extent to which each of the determinants affects the audit of strategic risk using the findings of previous studies that have been done (Arena & Azzone, 2009; Leung et al., 2004; Pappé et al., 2003). Management support of the internal audit function has strongly been identified as that which greatly influences the audit of strategic risk. This is consistent with the findings of Sarens and DeBeelde (2006), Mihret & Yismaw (2007), and that of Cohen and Sayag (2010).

The organizational setting of the internal audit function should be appropriate to allow for effective audit of strategic risk. This was reflected in the findings where a positive relationship was established between the audit of strategic risk and the independence of the audit function, as reflected in the studies done by Mihret and Yismaw (2007) and by Glasscock (2002). This relationship was also drawn by Abbot et al. (2010) and as such, the status of internal audit in the organizational structure will determine the extent of objectivity of its function.

Resources allocated to the audit of strategic risk by the internal audit function indicated a positive relationship with audit of strategic risk. These results are inconsistent with those reported by Carcello et al. (2005) which established that the resources allocated to the internal audit function relate to the size of the company, operating cashflow, and the audit committee's review of the internal audit budget.

Competency of the internal audit team influences the quality of their work in the involvement of strategic risk. The research affirmed to the previous studies done on the component of internal audit competency (Zain et al., 2006). The skills and experience of the internal auditors are also paramount to the audit of strategic risk confirming previous studies done by Messier and Schneider (1988) and Suwaiden and Quasim (2010). The length of time the internal audit function has been in existence played a role in its involvement and consideration of strategic risk, further confirming research findings by Mohammed et al. (2012) and Sarens and Abdolmohammadi (2011).

The presence of a risk management unit enhanced and supplemented the work of the internal audit function in audit of strategic risk. The skills that internal auditors may lack with regard to strategic risk would be complemented by the risk management unit. This is consistent with the research findings of Fraser and Henry (2004). However, the investment of a risk management unit, as established by this study is prevalent in the commercial and regulatory state corporations, which implies that the nature of state corporation operations determined the existence, collaborates findings by Page and Spira (2004).

The findings of this study on the involvement of the management and directors in the preparation of the internal audit plan are inconsistent with the findings of Christopher et al. (2009). This study draws a negative relationship between the involvement and audit of strategic risk.

It can be concluded that the determinants of internal audit identified in the study other than participation of management and directors in providing input to the internal audit plan, all have a positive implication on the audit of strategic risk, and internal auditors should consider them.

5.4 Implications

The beneficiaries of this study, such as the audit and accountancy profession, shall have a base upon which standards can be set. Guidelines shall be drawn from the relationships that have been established in the research. Members of the profession shall be informed on the determinants that are necessary for the audit of strategic risk, which will enhance the quality of their work.

Donors, in this case the government of Kenya, shall be assured that the goals for the establishment of the state corporations will be realized. This is because the internal audit function will steadily increase their role in the audit of strategic risk and periodically report to the audit committee on the status. It shall result in the organization allocating funds only to strategic activities of the organization.

The internal auditor shall thus be viewed as an important partner in business decision making thereby adding value to the overall functioning of the organization. Consideration of strategic risk in the audit plan shall further augment the skills and experience of the internal auditor.

Audit committees' relevance shall improve as they shall be reporting to the other board members the risks the organization is faced with in pursuit of its primary objective.

All the respondents indicated that there was a strategic plan that was in place that ranged from between three to ten years. The existence of a strategy to propel the organization to a desired level in future implies that there are risks that will be inherent in the execution

of the strategy. This therefore calls for internal auditors and to a greater extent the board, to ensure that adequate resources are allocated towards strategic planning, assessment, and audit of strategic risk, as it was evident that most resources were allocated to financial and organizational risk.

The internal auditor should not erode the independent function of internal audit by participating in strategic activities of the organization, but draw a clear line on the role that they play and how it complements management in achieving their objectives. They should have a clear reporting framework to the audit committee of the board. Though, the presence of a risk management unit enhances the audit of strategic risk, it should only be considered based on the nature of operations of the organization and its size. Continuous investment in the training and development of the internal auditors in strategic risk should be supported by management as this shall enhance their business knowledge of the strategic operations of the organization, and subsequently, the audit of strategic risk.

5.5 Recommendations for Further Research

A number of opportunities exist for further study:

- This study was limited to state corporations of Kenya. It did not consider public listed companies whose operations are more under scrutiny from shareholders. It would be interesting to ascertain the extent to which they consider the determinants of internal audit effectiveness in the audit of strategic risk, and also explore how they effectively use them. This will highlight any differences, if any, and conclusively define the variables affecting the audit of strategic risk in Kenya.
- In addition it would be interesting to investigate the various ways in which the different state corporations in their respective functional categories are influenced by strategic risk. This will help the internal auditors focus their resources on the areas that will have the greatest impact in realization of the strategic objectives of the organization.

- A more refined understanding of the implications of the determinants of the internal audit function in audit of strategic risk could have been obtained by complementing the results of the survey with interviews of respondents. Future research could examine the viewpoints of other management staff and directors of the organization with reference to the perceptions of the internal audit in audit of strategic risk.
- This study was limited to state corporations in Kenya. It is unlikely that the determinants of internal audit in audit of strategic risk would be similar in other state corporations if the research was carried out in different countries.
- There is also need for in depth examination of how the audit of strategic risk has improved the performance of state corporations.

5.6 Limitations of the study

The limitation of the research is readily ostensible. As in most studies examining a case, the generalizability of the findings and the conclusions therein derived is limited, though the research provides great insight into the determinants of internal audit that are key to audit of strategic risk.

The portrait of internal auditors in state corporations is subject to the general limitations of the questionnaire survey method, which include respondent fatigue and measurement bias. To enhance statistical analysis, open ended questions were not used in the study. The researcher thus tried to ensure that as much as possible was captured in the questionnaire to obtain the desired results of the study.

The findings pertain exclusively to the internal auditors' viewpoint. The viewpoints of management and directors could differ the findings that were obtained. It could be that management does not view the internal audit function as adding value to the operations of the organization. The costs associated with the establishment and running of the internal audit function could be a deterrent. Directors of the organizations could view internal audit function as an operational cost center that they could overly do without.

This study was limited to only those state corporations that have an internal audit function. Out of the 178 state corporations, 35 did not have an internal audit function. This may have influenced the results and its openness to generalization.

5.7 Chapter Summary

This chapter highlighted the conclusions and the recommendations based on the findings of the research. This study examined the determinants of internal audit in the audit of strategic risk. This was done by focusing on the key objectives of the study which were, to identify the determinants of internal audit considered in the audit of strategic risk and the extent by which internal auditors of state corporations audit strategic risk.

The findings of the study directs that similar studies should be done on the topic in other national set ups and also in different environmental settings. This would help in the development of better global understanding of the determinants on internal audit in audit of strategic risks. It would further guide the patterns of professional internal auditing practice.

REFERENCES

- Abbot, Parker S, & Peters G.F. (2010). Serving two masters: the association between audit committee and internal audit activities. *Accounting Horizon*, 24(1), 1–24.
- Adams M.B. (1994). Agency theory and the internal audit. *Managerial Auditing Journal*, 9, 8–12.
- Affandi R M. (1978). *Public enterprises in Malaysia: roles, structures and problems*. Kuala Lumpur: P.P.P.M.
- Albright R M, Winston W L, & Zappe C J. (2009). *Data analysis and decision making* (3rd ed.). Mason, USA: South-Western Cengage Learning.
- Alchian A A. (1965). Some economics of property rights. *Politico*, 2, 30.
- Allan N, & Beer L. (2006). *Strategic risk: It's all in your head*. School of Management, University of Bath.
- Anderson D, Francis J R, & Stokes D J. (1993). Auditing, directorships and the demand for monitoring. *Journal of Accounting and Public Policy*, 12(4), 353–375.
- Anderson R J, & Frigo M L. (2011). What is strategic risk management. *Strategic Finance*, 21–22.
- Archambeault D S, DeZoort F T, & Holt T P. (2008). The need for an internal auditor report to external stakeholders to improve governance transparency. *Accounting Horizon*, 22(4), 375–388.
- Arena M, & Azzone G. (2009). Identifying organizational drivers of internal audit effectiveness. *International journal of Auditing*, 13(1), 43–60.
- Aron R, Clemoins E K, & Reddi S. (2005). Right Sourcing: understanding and managing risk. *Journal of Managment Information Systems*, 22.

- Baker N. (2001). The risk list. *Internal Auditing and Business Risk*, 16–18.
- Beasley M S, & Frigo M L. (2007). Strategic risk management: creating and protecting value. *Strategic Finance*, 25–31.
- Berstein P L. (1996). *Against the gods: the remarkable story of risk*. New York.
- Bolton G. (2000). Turnbull. *Internal Auditing and Business Risk*, 36–37.
- Brody R G, Golen S P, & Reckers P M J. (1998). An empirical investigation of the interface between internal and external auditors. *Accounting and Business Research*, 28(3), 160–172.
- Brown P R. (1983). Independent auditor judgment in the evaluation of internal audit functions. *Journal of Accounting and Research*, 21(2), 444–455.
- Bryman A, & Bell E. (2007). *Business research methods* (2nd ed.). New York: Oxford University Press.
- Burgelman R, & Grove A. (2007). Let chaos reign, then reign in chaos-repeatedly: managing strategic dynamics for corporate longevity. *Strategic Management Journal*, 28(10), 965–979.
- Buttery R. (1985). Widening role of audit. Public Finance and Accountancy. *Public Finance and Accountancy*, 41.
- Campbell J E, & Mohan N. (1992). The impact of corporate downsizing on internal auditing. *Internal Auditing*, 3–9.
- Caplan D H, & Kirschenheiter M. (2000). Outsourcing and audit risk for internal audit services. *Contemporary Accounting Research*, 17(3), 387–428.

- Carcello J V, Hermanson D R, & Raghunandan K. (2005). Changes in internal auditing during the time of the major US accounting scandals. *International journal of Auditing*, 9(2), 117–127.
- Cathcart R, & Kapoor G. (2010). An internal audit upgrade. *Internal Auditor*, 47–49.
- Caves D W, Christensen L R, Swanson J A, & Trethway M W. (1982). *Managing public enterprises*. Thompson: Praeger.
- Christopher J, Sarens G, & Leung P. (2009). A critical analysis of the independence of internal audit function: evidence from Australia. *Accounting, Auditing & Accountability Journal*, 22(2), 200–223.
- Clarke C, & Varma S. (1999). Strategic risk management: the new competitive edge. *Long Range Planning*, 32(4), 414–424.
- Cohen A, & Sayag G. (2010). The effectiveness of internal auditing: an empirical examination of its determinants in Israeli organizations. *Australian Accounting Review*, 20(3), 296–307.
- Coombs H, & Jenkins E. (1994). *Public sector financial management* (2nd ed.). London: Thompson Learning.
- Cooper D R, & Schindler P S. (2008). *Business Research Methods* (10th ed.). New York: McGraw-Hill.
- Cooper D R, & Schindler P S. (2011). *Business Research Methods* (11th ed.). New York: McGraw-Hill.
- Cooper T, & Faseruk A. (2011). Strategic risk, risk perception and risk behavior: meta – analysis. *Journal of Financial Management and Analysis*, 24(2), 20–29.

- Coram P, Ferguson C, & Moroney R. (2008). Internal audit, alternative audit structures and the level of misappropriation of asset fraud. *Accounting and Finance*, 48(4), 1–17.
- Das T K. (1986). *The subjective side of strategic making: future orientations and perceptions of executives*. New York: Praeger.
- Das T K, & Teng B S. (2001). Strategic risk behavior and its temporalities: between risk propensity and decision context. *Journal of Management Studies*, 38(4), 515–534.
- DeAngelo L. (1981). Auditor size and quality. *Journal of Accounting and Economics*, 3(3), 183–199.
- DeFond M L. (1992). The association between changes in client firm agency costs and auditor switching. *Auditing. A Journal of Practice and Theory*, 11(1), 16–31.
- DeZoort F T. (1998). An analysis of experience effects on audit committee members oversight judgement. *Accounting, Organizations and Society*, 23(1), 1–21.
- Diamond J. (2002). *The role of internal audit in government financial management: an integrated perspective*. Washington: IMF Fiscal Affairs Department.
- Dillman D A. (2000). *Mail and web based survey: the tailored designed method*. New York: John Wiley and Sons.
- Dittenhofer M. (2001). Internal auditing effectiveness: an expansion of present methods. *Managerial Auditing Journal*, 16(8), 443–450.
- Dowsett P, & Morris T. (1981). Implementing CIPFA's internal audit statements. *Public Finance and Accountancy*, 41.
- Doyon M. (1996). Tuned-in to management. *Internal Auditor*, 53(6), 36–41.

- Eden D, & Moriah L. (1996). Impact of Internal Auditing on Branch Bank Performance: A Field Experiment. *Organizational Behaviour and Human Decision Performance*, 68, 262–271.
- Eisenhardt K. (1989). Agency and institutional explanations of compensation in retail sales. *Academy of Management Journal*, 14(1), 57–74.
- Emblemsvag J, & Kjolstad L E. (2002). Strategic risk analysis. *Management Decision*, 40(9), 842–852.
- Ettredge M, Reed M, & Stone M. (2000). An examination of substitution among monitoring devices: the case of internal and external audit expenditures. *Review of Quantitative Finance and Accounting*, 15(1), 57–79.
- Fraser I, & Henry W. (2004). Better off apart. *Internal Auditing and Business Risk*, 26–28.
- Frigo M L. (2002). *A balance scorecard framework for internal auditor departments*. Florida: Florida Institute of Internal Auditing. Research foundation.
- Gates S. (2006). Incorporating strategic risk into enterprise risk management: a survey of current corporate practice. *A Journal of Applied Corporate Finance*, 18.
- Glasscock. (2002). Auditees or clients. *The Internal Auditor*, 59(4), 84–85.
- Goodwin J. (2004). A comparison of internal audit in the private and public sectors. *Managerial Auditing Guideline*, 19(5), 640–650.
- Goodwin-Stewart J, & Kent P. (2006). The use of internal audit by Australian companies. *Managerial Auditing Journal*, 21, 81–101.
- Government of Kenya. (1965). *African Socialism and its application to Planning in Kenya* (No. Sessional Paper 10).

- Government of Kenya. (1979). *Review of Statutory Boards*. Kenya.
- Government of Kenya. (1982). *Report of the Working Party on Government Expenditure*. Kenya.
- Government of Kenya. State Corporation Act. , Pub. L. No. Chapter 446 (1987).
- Government of Kenya. (2005). *Privatization of State Corporations* (Draft sessional paper).
- Government of Kenya. (2006). *Public Financial Management Reform Strategy*. Kenya.
- Government of Kenya. (2010). *Constitution of Kenya* (p. Chapter 12). Kenya.
- Gramling A, & Meyers P. (1997). Practioners and users perceptions of the benefits of certification of internal auditors. *Accounting Horizon*, 11(1), 39–53.
- Gramling A, & Meyers P. (2009). Internal audit quality: would we know if we saw it. *Internal Auditing*, 24(1), 39–53.
- Hagigi M, & Sivakumar K. (2009). Managing diverse risk: an integrative framework. *Journal of International Management*, 15(3), 286–295.
- Hambrick D C, & Mason P A. (1984). Upper echelons: the organization as a reflection of its top managers. *Academy of Management Review*, 9, 193–206.
- Ho S, & Hutchinson M. (2010). Internal audit department characteristics/activities and audit fees: some evidence from Hong Kong firms. *Journal of International Accounting, Auditing and Taxation*, 19(2), 121–136.
- Hubbard L D. (2000). Audit planning. *Internal Auditor*, 57(4), 20–21.
- Institute of Internal Auditors. (2006). *The role of auditing in public sector governance*. USA: Institute of Internal Auditors.

- James K. (2003). The effect of internal audit structure on perceived financial statements fraud. *Accounting Horizon*, 17(4), 315–327.
- Jensen M C, & Meckling W H. (1976). Theory of the firm: managerial behavior, agency costs and ownership structures. *Journal of Financial Economics*, 3, 305–360.
- Jones M E, & Sutherland G. (1999). *Implementing Turnbull: a boardroom briefing*. London: The Centre for Business Performance . ICAEW.
- Jones R, & Pendlebury M. (2000). *Public sector accounting* (5th ed.). London: Prentice Hall.
- Keller G. (2001). *Applied Statistics* (New.). USA: Duxbury, Pacific Grove.
- Khera S S. (1963). *Government in Business*. Bombay: Asia Publishing House.
- Khoury H M. (2011). *Internal audit in the public sector: the quiet revolution* (pp. 41–45). Middle East: Deloitte and Touche.
- Kiesler S, & Sproull L S. (1986). Response effects in the electronic survey. *Public Opinion Quartely*, 50(3), 402–413.
- Leung P, Cooper B J, & Robertson P. (2004). *The role of internal audit in corporate governance and management*. Melbourne: RMIT Publishing.
- Lindow P, & Race J D. (2002). Beyond traditional audit techniques. *Journal of Accountancy*, 28–33.
- Loras J. (2011). Strategic risk management practice: how to deal effectively with major corporate failures. *Management Decision*, 49(1), 167–170.
- Lusk E, Halperin M, & Heilig F. (2011). Market and financial performance as related to idiosyncratic risk and the effect of outlier screening in market securities. *Management Decision*, 49(1), 167–170.

- Mangione T.W. (1995). *Mail Surveys: Improving the quality*. CA: Thousand Oaks.
- Maniatis G C. (1970). Social calculus, profitability and the conduct of public corporations. *The American Journal of Economics and Sociology*, 29(3).
- Mat Zain M, Subramaniam N, & Stewart J. (2006). Internal auditors assessment of their contribution to financial statements audits: the relation with audit committee and internal audit function characteristics. *International Journal of Auditing*, 10(1), 1–18.
- Messier W F, & Schneider A. (1988). A hierarchical approach to the external auditor's evaluation of the internal audit function. *Contemporary Accounting Research*, 4(2), 337–353.
- Miguel S J G, & Govindarajan V. (1984). The contingent relationship between the controller and internal audit functions in large organizations. *Accounting, Organizations and Society*, 9(2), 179–188.
- Mihret D, & Yismaw A. (2007). Internal audit effectiveness: an Ethiopian public sector case study. *Managerial Auditing Journal*, 22(5), 470–484.
- Miles R E, & Snow C C. (1978). *Organizational strategy, structure, and process*. New York: McGraw-Hill.
- Ministry of Finance. (2006). *Public Sector Guidelines for Audit Committees*. Kenya.
- Mitchell R. (2010). *Risk Management in the front line*. Economist Intelligent Unit.
- Mohammed Z, Zain M M, Subramaniam N, & Yusoff W F W. (2012). Internal audit attributes and external audit's reliance on internal audit: implications for audit fees. *International Journal of Auditing*, 16, 268–285.

- Mugenda O, & Mugenda A. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: African Centre for Technology Studies.
- Nagy A L, & Cenker W J. (2002). An assessment of the newly defined internal audit function. *Managerial Auditing Journal*, 17(3), 130–137.
- Niskanen W A. (1971). *Bureaucracy and representative government*. Chicago: Aldine - Atherton.
- Ojiako G U, Johnson J E V, Chipulu C, & Marshall A. (2010). Unconventional competition-drawing lessons from the military. *Prometheus*, 28(4), 343–360.
- Ojiako U. (2012). Examining thematic elements in strategic business risk. *Management Research Review*, 35(2), 90–105.
- Okibo B W, & Kamau C G. (2012). A study to explore internal auditors' compliance with quality assurance standards: a case of state owned corporations in Kenya. *International Journal Research Studies in Management*, 1(1), 109–126.
- Oliverio M E, & Newman B H. (1991). Internal auditor participation in external audits. *Internal Auditing*, 57–67.
- Oppenheim. (1992). *Questionnaire, design, interviewing and attitude measurement*. New York: Printer Publishers.
- Page M, & Spira L F. (2004). *The Turnbull Report, internal control and risk management: the developing role of internal audit*. Edinburgh: The Institute of Chartered Accountants of Scotland.
- Pallant J. (2007). *SPSS survival manual* (3rd ed.). London: McGraw-Hill Education.

- Paolo A M, Bonamino G A, Gibson D, Patridge T, & Kallail K. (2000). Response rate comparisons of email and mail distributed student evaluations. *Teaching and Learning in Medicine*, 12(2), 81–84.
- Pappe L, Scheffe J, & Snoep P. (2003). The relationship between the internal audit function and corporate governance in the EU – a survey. *International Journal of Auditing*, 7(3), 247–262.
- Piper A. (2002). Getting risk in focus. *Internal Auditing and Business Risk*, 18–22.
- Polit D F, & Beck T C. (2004). *Nursing research and principles*. Philadelphia: Lippincott Williams & Wilkins.
- Preece J, Rogers Y, & Sharp S. (2002). *Interaction design, beyond human computer interaction*.
- Ruud T F. (2003). *The internal audit function: an integral part of organizational governance*. Florida: The Institute of Internal Auditors Research Foundation.
- Sarens G, & Abdolmohammadi M J. (2007). *Agency theory as a predictor of the size of the internal audit function in Belgian companies*. University of Antwerp.
- Sarens G, & Abdolmohammadi M J. (2011). Monitoring effects of the internal audit function: agency theory versus other explanatory variables. *International Journal of Auditing*, 15, 1–20.
- Sarens G, & DeBeelde I. (2006). The relationship between internal auditors and senior management: a qualitative analysis of expectations. *International Journal of Auditing*, 10, 219–241.

- Sarens G, Marco A, D'onza G, & Melville R. (2011). Are internal audit practices related to the age of the internal audit function?: Exploratory evidence and directions for future research. *Managerial Auditing Journal*, 26(1), 51–64.
- Saunders M, Lewis P, & Thornhill A. (2009). *Research methods for business students* (5th ed.). Edinburgh Gate England: Pearson Education.
- Sawyer L B. (1995). An internal audit philosophy. *Internal Auditor*, 46–55.
- Schloss H H. (1970). *Productivity in public enterprises* (No. 41).
- Sherer M, & Kent D. (1983). *Auditing and accountability*. London: Pitman.
- Shirley M. (1983). *Managing state owned enterprises* (No. 577). Washington: WorldBank.
- Shoham A, & Fiegenbaum A. (2002). Competitive determinants of organizational risk-taking attitude: the role of strategic reference points. *Management Decision*, 40(2), 127–141.
- Smith M E, Thorpe R, & Jackson P R. (2008). *Management Research* (3rd ed.). London: Sage Publications, Oliver Yard.
- Sobel P J. (2011). *Internal auditing's role in risk management*. The Institute of Internal Auditors.
- Spraakman G. (1997). Transaction cost economics: a theory for internal audit? *Managerial Auditing Journal*, 12(7), 323–330.
- Stern G M. (1994). 15 ways internal auditing departments are adding value. *Internal Auditor*, 51(2), 30–33.
- Suwaiden M S, & Quasim A. (2010). External auditors, reliance on internal auditors and its impact on audit fees. *Managerial Auditing Journal*, 25(6), 509–525.

- Swoboda S J, Muehelberger N, Weitkunat R, & Schneeweiss S. (1997). Web based survey by direct mailing: an innovative way of collecting data. *Social Science Computer Review*, 15(3), 242–255.
- Tambunan T. (1993). *Some issues with respect to the relative efficiency of public enterprises* (pp. 451–462).
- Trewin N, Ojiako G U, & Johnson J. (2010). Risk management and its practical application-lessons from the British army. *Journal of Risk Research*, 13(5), 669–686.
- Van Gansberghe C N. (2005). Internal Auditing in the public sector. *Internal Auditor*, 69–73.
- Vijayakumar A N, & Nagaraja N. (2012). Internal controls systems: effectiveness of internal audit in risk management at public sector enterprises, 5(1), 1–8.
- Vonya Global. (2009). *Executive survey on the strategic role of internal audit*.
- Walker, M. (1988). The information economics approach to financial reporting. *Accounting and Business Research*, 18(72), 170–182.
- Wallace W A. (1980). *The economic role of the audit in free and regulated markets*. New York: University of Rochester.
- Watts R L. (1988). Discussion of financial reporting standards, agency costs and shareholder intervention. *Journal of Accounting Literature*, 7, 125–132.
- Watts R L, & Zimmerman J. (1983). Agency problems, auditing, and the theory of the firm: some evidence. *Journal of Law and Economics*, 26(3), 613–634.
- Weingardt J. (2001). Unlocking value through internal audit. *Financial Executive*, 53–56.

- Winfrey F L, & Budd J L. (1997). Reframing strategic risk. *SAM Advanced Management Journal*, 13–22.
- Wood G L, & Haber J. (2010). *Nursing Research: Methods and critical appraisal for evidence - based practice* (6th ed., Vol. 1). Mosby.
- Xiangdong W. (1997). Development trends and future prospects of internal auditing. *Managerial Auditing Journal*, 12(4), 200–240.
- Yuchtman E, & Seashore S E. (1971). *A system resource approach to organizational effectiveness*. California: Pacific Palisades calif: Good year.
- Yun G W, & Trumbo C W. (2000). Comparative response to a survey executed by post, email and web form. *Journal of Computer Mediated Communication*, 6(1), 1–25.
- Zain M M, Subramaniam N, & Stewart J. (2006). Internal auditors' assessment of their contribution to financial statements audits: the relation with audit committee and internal audit function characteristics. *International Journal of Auditing*, 13(1), 1–18.
- Zikmund W G. (2000). *Business research methods* (6th ed.). Texas: Dryden Press.

Appendix 1: Letter of introduction

Dear respondent,

**RE: REQUEST TO SEEK RESPONSE ON THE EFFECTIVENESS OF
INTERNAL AUDITORS IN AUDITING STRATEGIC RISK IN STATE
CORPORATIONS**

I am a student at Strathmore University pursuing a Masters of Commerce Degree.

I am carrying out a research on the extent of involvement of internal auditors in state corporations in assessing strategic risk. Strathmore University requires graduates to carry out a research thesis in partial fulfillment of the master of commerce degree program. This study aims at indicating whether internal auditors are involved in monitoring the strategic risk facing state corporations that they work for.

Kindly read through the questions carefully and answer them. Additionally, feel free to comment where you deem it fit to do so. It will be much appreciated if you would complete the questionnaire and respond within the shortest time.

The study will be conducted solely for academic research purposes and the information you give will be treated with strict confidence. The results of the research will not include reference to any individual or organization. You can obtain the findings of this research on request. For further information, please contact the researcher on vodindo@gmail.com or on +254 722 928 674.

Kind regards

Victor Odindo

Appendix 2: Research Questionnaire

Implications of the determinants of internal audit effectiveness on audit of strategic risk in State Corporations in Kenya

This questionnaire is divided into three sections. The first section seeks to establish the bio data of the institution. The second section consists of questions that examine the internal audit function and the third section seeks to establish the determinants of internal audit effectiveness and audit of strategic risk.

Section 1

1. How long has the organization been in existence? Tick the most appropriate

<1 year_____ 1-2 years_____ 3-4 years_____ 4-8 years_____ > 9
years_____

2. What is the functional category of your organization? Please tick the most appropriate.

Financial	☐	Commercial/Manufacturing	☐
Regulatory	☐	Public Universities	☐
Training and Research	☐	Service	☐
Regional Development Authorities	☐	Tertiary education and training	☐

3. Is your organization listed in the Nairobi Securities Exchange? Yes_____ No_____

4. Kindly indicate the number of staff based on the following categories.

Technical_____ Management_____ Other_____

5. What is the composition of the board (in numbers) based on private and public sector representation?

Public sector _____ Private _____

6. Does the organization have a strategic plan? Yes ☐ No ☐

If yes, what is the plan period of the strategy? Tick the most appropriate

1-3 years _____ 3-5 years _____ 6-10 years _____ Over 10 years _____

7. Does your organization have an independent risk management unit? Yes ☐ No ☐

Section 2: Audit Function activities

1. How many years has the internal audit function been in place? Tick the most appropriate

<1 year _____ 1-2 years _____ 3-4 years _____ 4-8 years _____ > 9 years _____

2. What is the number of internal audit staff based on the following categories?

Management _____ Technical _____ Support _____
Other _____

3. To what extent do you agree with the following on the functions of the internal audit (tick in the box against each of the statement):

1 = Strongly agree 2= Somewhat agree 3= Neither agree or disagree 4= Somewhat disagree

4 = Strongly disagree

	1	2	3	4	5
Internal Audit is aligned with the strategic direction of the organization					
Assessing strategic risk is part of internal audit mission					
Internal audit comprehensively recognizes the strategic direction & goals of the organization					
Activities of internal audit enhance the organization's ability to meet its strategic objectives					
Internal audit's ability to identify and assess strategic risks creates value to the organization					
There is a process of strategic risk identification in internal audit					

4. How are the following stakeholders aware in your view of the strategic risks facing the organization? (Use a scale of 1 to 5, with 1= not aware 2 = somehow not aware 3= neither not aware nor fully aware 4= somehow aware 5 = fully aware)

	1	2	3	4	5
Head of Internal Audit					
Audit Committee					
Chief Executive Officer					
Board of Directors					
Operations line management					

4. What percentage of resources (in hours) does internal audit devote to audit of the following risks?

Risk	Percent (%)
Financial risk	_____
Organizational risk	_____
Strategic risk	_____
Total	100%

Section 3: Determinants of internal audit effectiveness

1. Kindly indicate the number of internal audit staff who have relevant audit experience (in years) as guided

< 1 year _____ 1-2 years _____ 3years _____ >
3years _____

2. How many internal audit staffs have relevant professional qualification? (those that have CPA, CIA, ACCA, CISA)? Tick the most appropriate

<25% _____ 25 – 50% _____ More than 50% _____ All

3. To what extent do you agree with the following on internal audit skills and training; 1= strongly agree 2= somehow agree 3= neither agree nor disagree 4= somehow disagree 5 = strongly disagree

	1	2	3	4	5
The organization allows Internal Audit staff to participate in training and development programmes in order to maintain their skills and be abreast in the field of audit					
Internal audit staff have the appropriate & relevant education in auditing that allows them to audit all of the organization's systems (financial, operational, logistics)					
Internal audit has skills to identify and assess strategic risks					
Internal audit staff have experience to audit public sector organizations					

5. What percentage of training budget of internal audit is spent in each of the following?

Internal audit specific (such as technical/ functional) _____

Organization general skills (such as personal skills) _____

Business risk management _____

Others, Please specify _____

Total 100%

6. Does the internal audit function have an internal audit plan? Yes _____ No _____

7. How many years does your audit plan cover? Tick the most appropriate

1-3 years _____ 3-5 years _____ 6-10 years _____ Over 10 years _____

8. To what degree are the following involved in determining the audit plan and changes in the audit plan?

Not involved at all = 1 Somewhat not involved = 2 Neither involved or not fully involved = 3 Somewhat involved = 4 Fully involved = 5

	1	2	3	4	5
Head of Internal Audit					
Audit committee					
Chief Executive Officer					
Finance Director					
Operations line management					
Others, please specify:					

9. To whom does the internal audit department report as a function? Tick the most appropriate.

Board of Directors ☐ Audit Committee of the Board ☐

Chief Executive Officer ☐ Chief Finance Officer ☐

Others (please specify) _____

10. Who approves the internal audit department budget? Tick the most appropriate

Board of Directors	☐	Audit Committee of the Board	☐
Chief Executive Officer	☐	Chief Finance Officer	☐
Others (please specify) _____			

11. Who is mandated to appoint, dismiss and evaluate the manager of the internal audit function?

☐	☐
Board of Directors	Audit Committee of the Board
Chief Executive Officer	Chief Finance Officer
Others (please specify) _____	

12. To what extent in your view do you agree with the following on management support: 1= Strongly agree 2= Somehow agree 3= neither agree nor disagree 4= somehow disagree 5 = Strongly disagree

	1	2	3	4	5
Does management perceive internal audit as value adding					
Management implements internal audit recommendations					
Internal audit function participates in review of strategic plan with management					
Internal audit has the budget to identify and assess strategic risk					
Management does not provide enough support for training and developing of internal audit staff					

13. Who is responsible for administering the budget for the internal audit function? Tick the most appropriate.

Internal Audit Manager	☐	Audit Committee of the Board	☐
Chief Executive Officer	☐	Chief Finance Officer	☐

Others (please specify) _____

14. What percentage of the total available resources does internal audit function devote to the following?

Activity (%)	Percent
Conducting fraud investigations	_____
Conducting best practices/ process reviews	_____
Implementing process and controls changes	_____
Training	_____
Strategic risk assessment and planning	_____
Reporting to audit committee	_____
Carrying out the function's administrative work	_____
Others (please specify)	_____
Total (should equal 100%)	100

Thank you for your assistance