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**A STUDY OF THE EFFECTIVENESS OF INTERNAL
CONTROLS ADOPTED BY STATE PARASTATALS IN
KENYA**

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STATUTORY DECLARATION

“I declare in lieu of oath that, I have written this Masters paper myself and that, I have not used any source or sources other than stated for its preparation. I further declare that, I have clearly indicated all direct and indirect quotations. This bachelor paper has not been submitted elsewhere for examination purposes”

Date: 20/10/2016

Ruth Watiri Kimiri

DEDICATION

I dedicate this to my mother, a strong and gentle soul who supported me during the course of my studies, both in my undergraduate and in finally deciding to apply for a master's course. I hope that this achievement will complete the dream you had for me by giving me the best education you could.

ACKNOWLEDGEMENT

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ABBREVIATION AND ACRONYMS

American Institute of Certified Public Accountants	(AICPA)
Committee of Sponsoring Organizations of the Treadway Commission	(COSO)
New Kenya Co-operative Creameries.....	(New KCC)
Kenya Broadcasting Corporation.....	(KBC)
Kenya Power and Lighting Company.....	(KPLC)
National Oil Corporation of Kenya.....	(NOCK)
Kenya National Examination Council.....	(KNEC)
Kenya Tourist Board.....	(KTB)
Central Bank of Kenya.....	(CBK)
Media Council of Kenya.....	(MCK)
University of Nairobi.....	(UON)
Technical University of Kenya.....	(TUK)

ABSTRACT

The research sought to analyze the effectiveness of the internal control systems within the state parastatals in Kenya. The research sought to find out the nature and dynamics of the effectiveness of the internal controls that have been adopted by state parastatals in Kenya. The research was conducted on the backdrop of the the problem of weak internal controls that have dogged the state parastatals in Kenya. The research was necessitated by the fact that very few research work has been carried out to analyse the internal control effectiveness in the state parastatals in Kenya. The few research work that has been carried out only focuses on a single parastatal. This research will adopt a multi firm approach and this will enable the development of an integrated understanding of the weakness of the internal controls in parastatals in Kenya.

The research adopted a multi firm analysis and data was collected from 10 state parastatals and the data was collected by the use of questionnaires and data analysed using IBM SPSS analytical software version 23. The research adopted the COSO framework in formulating the theoretical framework for the research. The research sought to test strength of the five COSO framework components among the state parastatals in Kenya. After the analysis the research noted the following key findings: The control environment was the strongest component within the COSO framework for internal control system from the data analyzed for the state parastatals in Kenya. The control environment component was present in most of the state parastatals that were analyzed and performing well as indicated by the high mean Likert scale score of 3. 481. On the other hand The monitoring activities was the weakest among the five internal control components considered in the analysis with a low average mean Likert score of 2.515.

The inadequate segregation of duties within the parastatals was identified as the major factor hindering the effectiveness of the internal controls within the state parastatals. On the other hand, the board oversight was the best established aspect established within the parastatal that promoted the effectiveness of the internal controls.

CHAPTER ONE:

INTRODUCTION

1.1 Background of the study.

The concept of internal control systems within organizations is a concept that has been in practice for many years beginning from 1930's. Though the concept of internal controls has existed for many years in organizations its nature and meaning has evolved to a great extent over the years. Internal control in organizations emerged in 1930's and the concept of internal control was applied in organizations as a form of internal checks within the organization. The initial application of internal controls was simplistic and involved an internal control system whereby the duties performed by an employee in an organization would be set up in such a way that it checks the performance of another employee. The internal controls were an aggregation of these internal checks set up by the duties performed by each staff in the organization. (Sawyer, Dittenhofer, & Scheiner, 2003).¹The initial primary drive of the internal control within the organization was the detection and prevention of fraud within the organization.

From the 1930's simple application of internal controls in organizations American Institute of Certified Public Accountants (AICPA) saw it prudent to make the definition and the applicability of the internal controls. In 1949 (AICPA) proposed that the internal controls should constitute a plan that is adopted by the organization to perform the following roles; The first role of the broadened internal control would entail the safeguarding of the assets of the organization. The internal control would also ensure that the operational efficiency of the organization is optimized. The internal control would also seek to ensure that the accounting data that is provided by the firm is both accurate and reliable. The internal control within the organization would also seek to ensure that the organization abides to its policies and obligations.

Boynton, Johnson, & Kell, (2001) argued that the expansion in the recognition of the role played by internal controls in organizations was the fact that organizations had evolved from simple entities with a much wider scope. To manage these bigger organizations a system of internal

¹ Sawyer, L. B., Dittenhofer, M. A., & Scheiner, J. H. (2003). *Sawyer's Internal Auditing* (5th ed.). The Institute of Internal Auditors.

controls was necessary to ensure effective control. Another factor that promoted the prominence of the internal control in organizations was the realization that effective internal controls would provide mitigate against human errors and fraud (Boynton, Johnson, & Kell, 2001). Internal controls experienced a decline in application in business organizations between 1958 to 1980's and this can be attributed to the widespread failure of firms in 1980's. Following the widespread failure of companies in the 1980's there were three key bodies that were set up in United States, Canada and the United Kingdom to investigate the failure of companies, failure of audits to detect risk in businesses and increasing cases of fraud.

The three commissions commissioned in the United States, Canada and United Kingdom included; Treadway Commission, MacDonald Commission and Cadbury Commission in the United States, Canada and United Kingdom respectively. ²The report produced by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in 1992 formed the main reference benchmark for internal controls adoption in businesses. (COSO) defined internal controls as a process that provides assurances regarding the attainment of the organization objective. The assurances are provided by actions implemented by the board of directors, management and other personnel within the organization. The (COSO) 1992 framework sought to provide assurance by ensuring the following; the framework sought to ensure that there was reliability in the financial reports produced by the organizations. The framework also sought to ensure that there was efficiency and effectiveness within the organization operations. Finally, the framework was to ensure that there was compliance with the relevant policies and laws.

According to the revised framework proposed by (The Committee of Sponsoring Organizations of the Treadway Commission (COSO), 2013) internal control is constituted of five key components that include; Control environment; Risk assesment; Control activities; Information & Communication and monitoring activities.³

- **Control Environment:** The top management set forth the agenda on the importance of having effective internal controls within the organization. The nature and form of the control environment that is practiced by the organization is borne from the organizations

² Noorvee, L. (2006). Evaluation of The Effectiveness of Internal Control Over Financial Reporting.

³ The Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2013). *Internal Control-Integrated Framework (the 2013 Framework)*. The Committee of Sponsoring Organizations of the Treadway Commission (COSO).

values and beliefs. It is at this level that all the prerequisite resources that facilitate internal control are provided from the technical, physical and human capital resources.

- **Risk Assessment:** The risk assessment within the internal control system is in charge of identification and assessment of any possible risks that may face the organization thus hindering the achievement of goals and objectives. The risk assessment assigns objectives to various sections of the organization and carries out a dynamic analysis of all the risks that may hinder the achievement of the objectives. Risk assessment is also charged with identifying any fundamental risks that may have an impact on the broad system of internal controls in the organization.
- **Control Activities:** Control activities include all action that are captured in the organizations procedures and policies that seek to ensure that all the proposed mitigating measures proposed by the management are enforced and implemented. Under this the management proposes mitigating measures for all the potential risks that may face the organization.
- **Information & Communication:** Information and communication ensure that there is effective communication within the organization and from outside the organization. This enables the organization become a learning system that is dynamic enough to be able to react to any emerging risks. This is the component that ensures that there is timely and quality information that facilitates effective internal controls. This also helps all within the organization to be able to know their roles and obligations within the internal control system.
- **Monitoring Activities:** This ensures that there is constant feedback to the management about the actual performance of the whole information system. The monitoring activities ensure that each of the other component does indeed exist within the internal control system and function as intended. The monitoring activities also help to identify emerging threats and risks that have not been factored in by the internal control system.

1.1.1 Internal Controls and State Parastatals in Kenya.

There are two broad types of parastatals in Kenya. The first category of the state owned parastatals are those parastatals that are fully owned by the government and the other category entails the parastatals that are partially owned by the government and these include the subsidiary

parastatals. (Executive Office of the President-Republic of Kenya, 2013).⁴In Kenya the state owned parastatals serve four major roles that include the following; the first major role that is played by the state parastatals is to act as tools of promoting economic growth and development. The parastatals act as vehicles that drive growth and development within the country. The second role that is played by the state parastatals is facilitating capacity building within the country. The third role entails provision of essential services to the public which are best delivered by state owned parastatals. The final role that is played by the state parastatals is the creation of employment opportunities due to the fact that parastatals are usually large and require large number of employees for their operations.

The contribution of state parastatals in Kenya towards the Gross Domestic Product has been increasing gradually over the last few years. The output from state parastatals made up 9.54% of the Nominal GDP in 2008-2009 and this contribution rose to 11.64% in 2010-2011. (Executive Office of the President-Republic of Kenya, 2013).However it is important to note that both formal and informal employment numbers in state parastatals in Kenya has been declining gradually over the years.This reduction in the level of employment in state parastatals can be associated with the privatization drive that the Kenyan government has been engaged in.

⁴ Executive Office of the President-Republic of Kenya. (2013). *Report of The Presidential Taskforce on Parastatal Reforms*. Nairobi: Executive Office of the President-Republic of Kenya.

Item	Number
Commercial State Corporations	34
Commercial State Corporations with Strategic Functions	21
Executive Agencies	62
Independent Regulatory Agencies	25
Research Institutions, Public Universities, Tertiary Education and Training Institutions	45
Total Inventory of State Corporations as of 9 October 2013	187

Figure 1: Distribution of state parastatals in Kenya.

Adapted from: *(Executive Office of the President-Republic of Kenya, 2013)*

From Figure 1 above we can see that as at October 9th 2013 Kenya had 187 state parastatals. The parastatals are distributed as indicated in figure 1 above; 34 state parastatals are Commercial State Corporations; 21 are Commercial State Corporations with Strategic Functions; 62 are Executive Agencies; 25 are Independent Regulatory Agencies and 45 are Research Institutions, Public Universities, Tertiary Education and Training Institutions. (Executive Office of the President-Republic of Kenya, 2013).⁵ State corporations in Kenya have been characterized by increasing level of debt with some notable examples like Tana & Athi Rivers Development Authority (TARDA) had debts in excess of 3.44 Billion shillings that the government was forced to pay on the corporations behalf. To add to this Mumias Sugar another state parastatal has had to be bailed out to the tune of over 2 Billion shillings with an additional 1.1 billion shillings to be released in the future.

Weak internal controls and mismanagement has led to the collapse of some major parastatals that had to be bailed out by the government. Some of the major corporations that have experienced financial turmoil include; Kenya railways that collapsed and had to be sold to a private developer; Numerical Machining Complex that was to spearhead motor manufacturing in Kenya also collapsed due to mismanagement and poor internal controls. Kenya Meat Commission also

⁵ Executive Office of the President-Republic of Kenya. (2013). *Report of The Presidential Taskforce on Parastatal Reforms*. Nairobi: Executive Office of the President-Republic of Kenya.

failed and had to be restructured by the government.

To mitigate the increasing collapse and fraud within state corporations the government established the (State Corporations Advisory Committee-Kenya, 2015) to provide a framework for the improvement of the internal controls within the state parastatals. The State Corporations Advisory Committee made the following recommendations to promote the implementation of internal controls within parastatals. The internal controls in the parastatals entail the establishment of activities and processes and the relevant procedures that will provide the assurance that the organization will achieve its objectives. It is the duty of the board of directors to ensure that there is an effective and efficient internal control system. The internal control framework adopted in Kenya parastatals is based on the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework.

1.2 Statement of the problem

The performance of state parastatals in Kenya remains poor despite the steps that have been taken to promote and facilitate the application of the internal controls within the state parastatals. As noted by the report prepared by the taskforce charged with parastatals reforms in Kenya the state parastatals continue to face the following challenges; first the state parastatals have had increasing levels of debt. The increasing levels of debt can be as illustrated by the Tana & Athi Rivers Development Authority (TARDA) that had debts in excess of 3.44 Billion shillings that the government was forced to pay on the corporation's behalf. To add to this Mumias Sugar another state parastatal has had to be bailed out to the tune of over 2 Billion shillings with an additional 1.1 billion shillings to be released in the future (Executive Office of the President-Republic of Kenya, 2013).⁶

To add to the problem of increase in the debt undertaken by the parastatals the parastatals have also been faced with problems of mismanagement that has led to fraud instances and collapse of some major parastatals in Kenya. Just to illustrate this the report on the parastatals reforms in Kenya noted some major state parastatals that have been faced with fraud cases and subsequently been wound up or restructured. An example of state parastatals that have collapsed in Kenya include; Kenya Co-operative creameries (KCC); Kenya Meat Commission (KMC); Agricultural Finance Co-operation and Kenya Railways that had to be restructured and sold to a private

⁶ Executive Office of the President-Republic of Kenya. (2013). *Report of The Presidential Taskforce on Parastatal Reforms*. Nairobi: Executive Office of the President-Republic of Kenya.

investor.

The basis of conducting this research is to provide a detailed insight into the problem of weak internal controls that have dogged the state parastatals in Kenya. The research will seek to provide a framework for improvement of internal controls within the state parastatals. This research is necessitated by the fact that very few research work has been carried out to analyse the internal control effectiveness in the state parastatals in Kenya. The few research work that has been carried out only focuses on a single parastatal. This research will adopt a multi firm approach and this will enable the development of an integrated understanding of the weakness of the internal controls in parastatals in Kenya.

1.3 Objectives of the study

This research seeks to achieve the broad objective of :

1. Study the effectiveness of the internal controls that have been adopted by the state parastatals in Kenya.

The research has the following specific research objectives:

1. To determine the internal control procedures that are essential for the effectiveness of the internal control systems within the state parastatals in Kenya.
2. To identify the control environment procedures that are essential for the effectiveness of the internal controls in the state parastatals.
3. To identify the risk assessment measures that are essential for the effectiveness of the internal controls in the state parastatals.
4. To determine the internal control activities that are essential for the effectiveness of the internal control systems within the state parastatals in Kenya.
5. To identify the information & communication procedures that are essential for the effectiveness of the internal controls in the state parastatals.
6. To identify the monitoring activities that are essential for the effectiveness of the internal controls in the state parastatals.
7. To propose a framework of internal control that will enhance the effectiveness of the internal controls in the state parastatals.

1.4 Research Questions

The research is focused on answering the following research questions:

1. How effective are the internal control systems that have been adopted by state parastatals in Kenya?
2. What is the impact of control environment procedures on the effectiveness of the internal controls in state parastatals?
3. What is the impact of risk assessment measures on the effectiveness of the internal controls in state parastatals?
4. What is the impact of control activities procedures on the effectiveness of the internal controls in state parastatals?
5. What is the impact of Information & communication procedures on the effectiveness of the internal controls in state parastatals?
6. What is the impact of monitoring activities on the effectiveness of the internal control effectiveness in state parastatals?

1.5 Research Hypotheses.

The research will use various analytical techniques to test the following 5 hypotheses.

H₀: The control environment procedures within the state parastatals hinder the effectiveness of the internal controls.

H₁: The control environment procedures within the state parastatals promote the effectiveness of the internal controls.

H₀: The risk assessment procedures within the state parastatals hinder the effectiveness of the internal controls.

H₁: The risk assessment procedures within the state parastatals promote the effectiveness of the internal controls.

H₀: The control activities procedures within the state parastatals hinder the effectiveness of the internal controls.

H₁: The control activities procedures within the state parastatals promote the effectiveness of the internal controls.

H₀: The information & communication procedures within the state parastatals hinder the effectiveness of the internal controls.

H₁: The information & communication procedures within the state parastatals promote the effectiveness of the internal controls.

H₀: The monitoring activities within the state parastatals hinder the effectiveness of the internal controls.

H₁: The monitoring activities within the state parastatals promote the effectiveness of the internal controls.

1.6 Significance of the study

This research will be crucial in providing insight into the dynamics of the internal control framework within the state parastatals in Kenya. The research will be of importance in two aspects. The first major significance of this research is that the research will help identify the weaknesses that exist in the internal control systems that have been adopted by the state parastatals in Kenya. The research will also seek to identify strength areas in the internal control systems that have been adopted by the state parastatals in Kenya and ensure that they are enhanced and maintained. From the research the managers and the board of directors will gain insight on how to improve the effectiveness of the internal controls within the parastatals. The aggregate result of this research will be the reduction of the negative effects of weak internal controls and thus fraud and inefficiency in the parastatals will be minimized.

1.7 Scope of the study

This research focused its analysis within Kenya. The research focused on the state parastatals within Kenya and the parastatals to be considered were selected randomly across the country. The research used convenient sampling to draw samples across the 10 selected state parastatals within Kenya. The research focused its analysis on the management level within the state parastatals drawing samples from the top management; mid-level management and junior management within the state parastatals.

1.8 Limitation of the study

The achievement of the objectives of this research were limited by the time available for data collection. Collection of data using questionnaires usually takes more time than the use of secondary data sources. The research will primarily send the questionnaires via email and this may

negatively impact on the response rate. The response rate will be lower when questionnaires are delivered via email as opposed to self-delivered physical questionnaires.

1.9 Organization of the study

This research is composed of five distinct chapters:

The first chapter which is the introduction chapter will introduce the concept of internal controls in the public sector. The chapter will also define the research objectives and state the research problem. The second chapter deals with the literature that will expound on the theoretical and empirical literature review relating to the internal controls. The chapter will identify the research gaps and the spell out the research framework to be used. The third chapter is the research methodology and this chapter will spell out the research design to be adopted by the research. The fourth chapter deals with the data analysis and explanations. The last chapter will give the conclusions and policy recommendations that can be drawn from the research.

CHAPTER TWO:

LITERATURE REVIEW

2.1 Introduction

This chapter seeks to look at the various literature relating internal controls. The chapter will carry out a critical literature review first looking at the various theories that relate to the adoption of internal controls. The chapter will look at the internal control literature application in organizations and coalesce this literature on applicability in state parastatals. The chapter will also look at the various empirical studies that have been conducted relating to application of internal controls in state parastatals. The chapter will also seek to identify the research gaps that exist in relation to the conducted literature and from this we will bring forth a justification for carrying out this research. Finally, the chapter will look at the conceptual framework that will be adopted by the research clearly explaining the dependent and the independent variables that the research will consider.

2.2 Theoretical review

2.2.1 The Agency Theory.

Agency theory is an old theory that emanated from the field of economics in 1960's to 1970's. The agency theory was developed by economic scholars to provide an optimal solution for risk sharing among the various firm stakeholders. The agency theory provided a framework that would enable risk to be shared optimally among various individuals related to the firm (Jensen & Meckling, 1976⁷; Spence & Zeckhauser, 1971⁸). Agency theory explains the nature of the relationship that exists between the principals and the agents that act on behalf of the principals. The cornerstone of the agency theory is the assumption that the organization is made up of the summation of nexus relationships among various individuals. Agency theory in relation to the internal control seeks to explain the nature of the control that is brought about by the principal-agent centred controlled. The agency theory has been applied extensively in the formulation of internal control systems. The agency theory is used to establish internal control systems by

⁷ Spence, M., & Zeckhauser, R. (1971). Insurance, information, and individual action. *American Economic Review*, 55-73.

⁸ Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 305-360.

establishing principal-agent relationships in the organization whereby the agents is accountable to the principals. In agency theory the principals are the owners of the organization which constitute the shareholders of the organization. In the case of a state owned parastatal the principal is the government which is the owner of the parastatal. The citizens are the true owners of the parastatals but the government acts as the proxy owner representing the people's interests.

The agency theory enables the creation of accountability based relationship between the principal and the agent. The nature of the relationship that is established by the agency theory is a contract based relationship that has been formalized and this means that the agent is bound to act in the best interests of the principals who are the owners of the organization. (Jensen & Meckling , 1976).⁹The main reason for the establishment of a relationship that is of a contractual nature between the principal and the agent is the fact that both the principal and the agent have divergent interests. (Jensen & Meckling, 1976) were the first scholars to provide a framework to explain the dynamic principal-agent relationship which is set up in a contractual nature. The principal-agent theory relationship that was proposed by (Jensen & Meckling, 1976) entailed separation of the ownership and the control within an organization. In this agency relationship the principals who own the organization delegate the powers to implement control in the organization to the executive managers who act on behalf of the principals.

The agency theory proposes that the principals aspire to attain the higher level of needs as proposed by Maslow's theory of needs while the agents are much more focused in attaining the lower level needs. On this the agency theory proposes that for effective internal control to occur the principals have to ensure that the management does not establish an internal control system with loopholes that can be exploited by the managers. The major weakness of the agency theory is the failure to recognize the role that is played by other stakeholders that relate to the firm. The theory does not account sufficiently for the impact of the environment and community on the internal control system established based on the agency relationship.

2.2.2 The Reliability Theory.

Reliability theory is primarily concerned with the probability of an event occurring. Reliability theory seeks to predict the probability of a particular event or activity being completed

⁹ Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 305-360.

within a particular set time (Gavrilov & Gavrilova, 2001).¹⁰ Reliability theory is anchored in three key functions; the first function entails the estimation of the component reliabilities. Under the analysis of the of the component reliabilities a detailed study is conducted to ascertain the reliability of each individual component in the whole internal control system. Under the component reliability testing each aspect of all the aspects of internal controls are tested by comparing the actual data with the standards that have been set for the component. The component rest are mostly involved with testing the actual performance of the components and the optimum desired performance by carrying out the compliance checks. After the individual internal system components have been computed the reliability of all the components is aggregated and the total reliability for the whole internal control system computed. The final step in the reliability tests deals with the interpretation of the aggregated and individual reliability tests to identify areas within the internal control system that require immediate action.

The reliability theory owes its emergence to the maritime and life insurance industry in the 19th century that used the reliability theory to compute the most profitable rate to charge their clients. The reliability theory proposes that the internal control system within an organization is made up of various control components that are interrelated and interlinked to each other. The reliability theory proposes that the internal control system within an organization is said to be working effectively if all the elements are successful in fulfilling their desired function. From the success of the individual components within the control environment it then follows that in aggregation the internal control system will be working effectively as well. Reliability theory argues that the failure of one component in the internal control system leads to the failure and weakness of the whole internal control system within a firm. The cornerstone of the reliability theory is that actions should be taken to ensure that every component in the control system is working well as planned.

The reliability theory in the internal control system acts on the same basis as the work done by the external auditors who seek to check the weaknesses of internal systems within the firm. (Kinney, 2000).¹¹The reliability theory as applied in internal control within the organization is

¹⁰ Gavrilov, L. A., & Gavrilova, N. S. (2001). The Reliability Theory of Aging and Longevity. *Journal of Accounting, Auditing and Finance*, 213(4), 527-545.

¹¹ Kinney, W. R. (2000). Research Opportunities in Internal Control, Quality and Quality Assurance. *Journal of Practice and Theory*, 19(4), 83-90.

focused on identifying any material failures within all the components of the internal control system. The reliability theory thus argues that the effectiveness of the internal control system within the organization is ensured by ensuring that there are no material failures in all the components involved in the internal control system. The reliability theory proposes the identification of any failures in the internal control components and fixing them before the failures can adversely impact on the effectiveness of the internal control system as a whole. In a nutshell once the internal control components reliability is ensured the effectiveness of the internal control within the organization is guaranteed.

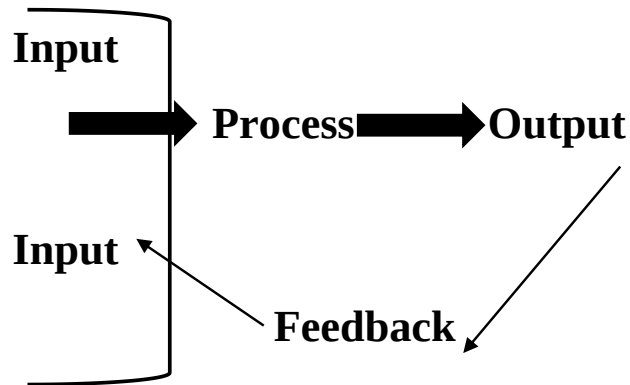
2.2.3 The System Theory and Internal Control System.

System theory is the most important theoretical framework that guides the formulation of any effective internal control system within any organization. System theory was initially proposed by (Bertalanffy, 1968) ¹² in his landmark publication “*General System Theory-Foundations, Development, Applications*” in 1968. Bertalanffy, (1968) defined a system as being made up of objects that work together in order to fulfil a particular goal. According to him a system is defined by the summation of its constituent parts and the dynamics of the relationships that exist between the parts that make up the system. The development of the system theory was fundamental in the development of the framework of understanding complex phenomena. This was enabled by the ability of the system approach to breakdown the complex phenomena into smaller parts which could be understood. After understanding the small parts, the large complex phenomena could be deciphered by the aggregation of the understanding of the small parts.

As proposed by (Bertalanffy, 1968) systems help in the conversion, materials and other inputs into a desired output that may be used either within the system or outside of the system. We have two broad types of systems; one is the open system that interacts with the external environment and the other is the closed system that does not interact with the external environment. System theory is based on the interaction of the various system elements that include the following; Goal, Environment, Control, Input, Process, Output and Feedback. System theory can be represented by the diagram below;

¹² Bertalanffy, L. v. (1968). *General System Theory-Foundations, Development, Applications*. New York: George Braziller.

Figure 2: System theory in action as proposed by (Bertalanffy, 1968).



The system theory as applied in the internal controls within an organization views organizations as a complex system that has several sub-systems within. The complex organizational system is then broken down to smaller sub-systems that may be in the form of a division within the organization, a business unit within the organization or even a department within the organization. The basic idea behind the application of the system theory in organizations is the due to the complexity of organizations an internal control system is necessary. The internal control system ensures that the organization is able to achieve its set of goals and objectives. The system theory approach revolutionized the operationalization of internal controls within organizations. System theoretical approach that has had the greatest impact on the internal control framework that is adopted by organizations today.

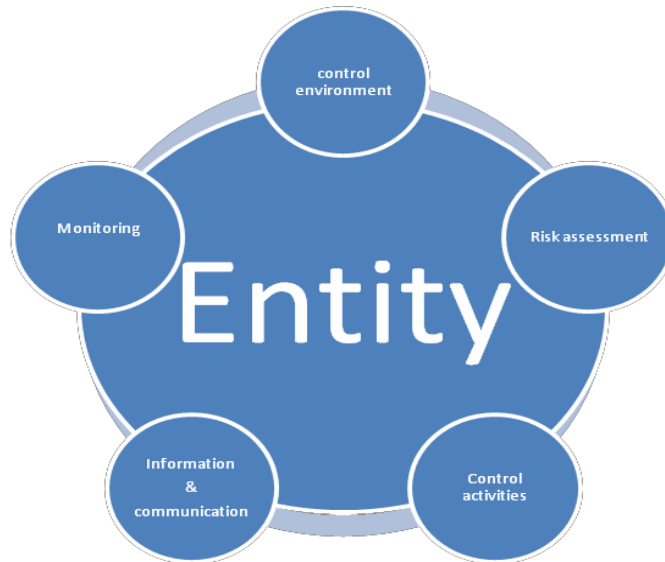
2.2.4 Internal Control framework as defined by Committee of Sponsoring Organizations of the Treadway Commission (COSO).

The Committee of Sponsoring Organizations of the Treadway Commission (COSO) has been at the forefront of driving the internal control framework that has been adopted by organizations globally. (COSO) have put forward two landmark internal control frameworks first in 1992 and a revised version in 2013. (Committee of Sponsoring Organizations of the Treadway Commission (COSO), 2013).¹³The framework that has been proposed by (COSO) in relation to

¹³ Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2013). *Internal Control - Integrated Framework (Executive Summary)*. Committee of Sponsoring Organizations of the Treadway Commission (COSO).

the internal control predominantly applies the system approach as indicated by Figure 2 below. The (COSO) framework proposes that the internal control system is made up of five components; Control environment, risk assessment, monitoring, control activities and Information & communication.

Figure 3: COSO Internal Control Framework for an Organization



Adapted from: (Ayagre, Gyamerah, & Nartey, 2014).

Figure 4:1992 COSO Cube Framework.



Adapted from: (The Committee of Sponsoring Organizations of the Treadway Commission (COSO), 1992).¹⁴

¹⁴ The Committee of Sponsoring Organizations of the Treadway Commission (COSO). (1992). *Internal Control-Integrated Framework (the 1992 Framework)*. The Committee of Sponsoring Organizations of the Treadway

Figure 5:2013 COSO Cube Framework.



Adapted from: *(The Committee of Sponsoring Organizations of the Treadway Commission (COSO), 2013).*¹⁵

According to the framework proposed by (The Committee of Sponsoring Organizations of the Treadway Commission (COSO), 2013) internal control is constituted of five key components that include; Control environment; Risk assesment; Control activities; Information & Communication and monitoring activities.¹⁶

- **Control Environment.**

Control environment is the top most component in the COSO defined internal framework. The control environment entails the processes, standards and the structures that act as the cornerstone on which the whole internal controls within the organization are set. This is the level of internal control within an organization that the top management are tasked with acting as the drivers and the initiators of the internal control process within the

Commission (COSO).

¹⁵ The Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2013). *Internal Control-Integrated Framework (the 2013 Framework)*. The Committee of Sponsoring Organizations of the Treadway Commission (COSO).

¹⁶ The Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2013). *Internal Control-Integrated Framework (the 2013 Framework)*. The Committee of Sponsoring Organizations of the Treadway Commission (COSO).

organization. The top management set forth the agenda on the importance of having effective internal controls within the organization. The nature and form of the control environment that is practiced by the organization is borne from the organizations values and beliefs. This is the internal control level that sets the agenda for the internal control within the organization. It is at this level that all the prerequisite resources that facilitate internal control are provided from the technical, physical and human capital resources.

Under the control environment component, the board of directors has to ensure that the management has the freedom to set up the internal controls within the firm. The management then establishes the structures and the reporting framework for accountability to be adopted within the organization and all this is with presence of the board's oversight. The organization should then also ensure that quality staff are engaged and retained to facilitate the operationalization of the internal control. Finally, all within the organization need to be held accountable to their duties and obligations in the internal control system.

- **Risk Assessment.**

This is the component within the internal control system that helps in the management of both internal and external risks that face the organization. The research assessment within the internal control system is in charge of identification and assessment of any possible risks that may face the organization thus hindering the achievement of goals and objectives. The risk assessment assigns objectives to various sections of the organization and carries out a dynamic analysis of all the risks that may hinder the achievement of the objectives. Under this the possibility of fraud within the organization is identified and mitigated. Risk assessment is also charged with identifying any fundamental risks that may have an impact on the broad system of internal controls in the organization.

- **Control Activities.**

Control activities include all action that are captured in the organizations procedures and policies that seek to ensure that all the proposed mitigating measures proposed by the management are enforced and implemented. Under this the management proposes mitigating measures for all the potential risks that may face the organization. The management then sets up policies and procedures to ensure that these measures are adopted to mitigate against the risk. Some of these control activities include the automation of payments, authorization levels, separation of duties, approval frameworks and performance appraisals.

- **Information & Communication.**

Information and communication is a very critical component of the internal control system. Effective information and communication framework ensure that there is efficient flow within the organization. Information and communication ensure that there is effective communication within the organization and from outside the organization. This enables the organization become a learning system that is dynamic enough to be able to react to any emerging risks. This is the component that ensures that there is timely and quality information that facilitates effective internal controls. This also helps all within the organization to be able to know their roles and obligations within the internal control system.

- **Monitoring Activities.**

This is the component within the internal control system that ensures that all the other components are functioning at the optimum levels. This ensures that there is constant feedback to the management about the actual performance of the whole information system. The monitoring activities ensure that each of the other component does indeed exist within the internal control system and function as intended. The monitoring activities also help to identify emerging threats and risks that have not been factored in by the internal control system.

2.3 Empirical Review

2.3.1 Global Studies:

Nwannebuike & Nwadiolor, (2016) conducted a research that sought to look at the effectiveness of the internal audit within the public sector in Nigeria.¹⁷ The research had three objectives, three research questions and three hypotheses. The research used the descriptive research design and used the simple random sampling to select the 4 parastatals that were included in the research. The research collected data by the use of a questionnaire that adopted a four point Likert scale. The research noted that there existed sufficient punishment framework for the violation of the laid down internal audit procedures. On the other hand, there existed a caveat in that the enforcement of these punishments within the public sector in Nigeria was found to be wanting. The research concluded that the best tactic for the improvement of the effectiveness of the internal audit was to ensure that there was a transparent recruitment process of the personnel

¹⁷ Nwannebuike, S. U., & Nwadiolor, E. O. (2016). Evaluation of Effectiveness of Internal Audit in The Nigerian Public Sector. *European Journal of Business, Economics and Accountancy*, 4(3), ISSN 2056-6018.

that are engaged in the internal audit function within then state parastatals (Nwannebuike & Nwadiakor, 2016).

Mihret & Yismaw, (2007) conducted a research in form of a case study to look at the effectiveness of the internal audit within the public sector in Ethiopia.¹⁸ The research was conducted to identify the factors within the public sector in Ethiopia that impacted on the effectiveness of the internal audit. The research was in form of a case study based on the public sector higher education institutions. The research found out that the management support to the internal audit function had a strong impact on the effectiveness of the internal audit function. The research also identified the quality of the internal audit that was conducted as having a strong impact on the effectiveness of the internal audit. The organizational structure dynamics and the internal audit staff personal temperaments had minimal impact on the effectiveness of the internal audit function. Ahmad, Othman, & Jusoff, (2006) also conducted a research that sought to look at the effectiveness of internal audit in Malaysian public sector.¹⁹ Their research identified the lack of adequate qualified audit staff as being the major factor that hindered the effectiveness of internal audit within Malaysian public sector. Arena & Azzone, (2009) conducted another research in Italy where organizational structure and the personal characteristics of the internal audit staff were identified as being the major impediments to the effectiveness of the internal audit function.²⁰

Ademola, Adedoyin, & Alade, (2015) conducted a research to analyse the impact of internal control systems in the public sector.²¹ They selected the Nigeria National Petroleum Corporation (NNPC) as the focus of their case study analysis. The research was conducted on the basis that the presence of internal controls has been identified as a critical component in the protection of valuable assets within an organization. The research identified internal controls as being a critical factor in reduction of waste within an organization. Internal controls help in

¹⁸ Mihret, D. G., & Yismaw, A. W. (2007). Internal audit effectiveness: An Ethiopian public sector case study. *Management Auditing Journal*, 22(5), 470-484.

¹⁹ Ahmad, N., Othman, R., & Jusoff, K. (2006). The effectiveness of internal audit in Malaysian Public Sector. *Journal of Modern Accounting and Auditing*, 5(6), 847-900.

²⁰ Arena, M., & Azzone, G. (2009). Identifying organizational drivers of internal audit effectiveness. *International Journal of Auditing*, 13, 43-60.

²¹ Ademola, I. S., Adedoyin, A. O., & Alade, O. R. (2015). Effect of Internal Control System in Nigeria Public Sectors: A Case Study of Nigeria. *International Journal of Economics, Commerce and Management*, 3(6), ISSN 2348 0386.

safeguarding of the assets and ensuring that there is a high level of accountability within an organization. The research used both primary and secondary sources of data. The research collected the primary data through the use of the questionnaires that were distributed to the various respondents. The research sought to ascertain whether internal controls were a critical factor in helping to prevent fraud in the public sector. The research found out that efficient internal controls helped in prevention of fraud within the public sector companies and reducing the operational irregularities experienced within the public sector companies.

Adewale, (2014) carried out a research that sought to look at the use of internal control system as a management tool to ensure proper accountability within the Custom services in Nigeria. The research sought to look at the nature of the role that is played by the internal controls in ensuring that there is efficient management in the Nigeria customs service. The research identified two groups that are directly responsible for the internal controls within Nigeria Customs services. The two groups composed of officers within the administration and enforcement departments within customs service in Nigeria. The research selected 100 respondents from the administrative and the enforcement department who were issued with questionnaires. The research had three research questions that included; the first question sought to know whether internal controls ensured proper accountability within the customs body.²²

The research conducted by (Adewale, 2014) sought to establish the role played by information technology in the internal control effectiveness. Finally, the research also sought to establish if the presence of internal checks ensured a higher level of accountability within the customs authority. The research concluded that the presence of adequate internal control measures promoted the level of accountability within the customs authority. (Babatunde, 2013)²³ conducted another research that sought to analyse the stakeholder's perception on the effectiveness of internal controls in ensuring financial accountability within the public sector in Nigeria. The research sought to establish the importance of effective internal controls in ensuring accountability within the public sector in Nigeria. The research also sought to establish the impact of ineffective internal

²² Adewale, H. O. (2014). Internal Control System: A Managerial Tool for Proper Accountability a Case Study of Nigeria Customs Service. *European Scientific Journal*, 10(13), ISSN: 1857 – 7881.

²³ Babatunde, S. A. (2013). Stakeholders' perception on the effectiveness of internal control system on financial accountability in the Nigerian public sector. *International Journal of Business and Management Invention*, 2(1), 16-33.

controls on the accountability within the public sector in Nigeria. The research collected data by the use of questionnaires that was collected from 250 respondents. The research found out that there exists a significant relationship between the stakeholder's perception of the internal controls and the accountability within the public sector. The research also found out that the presence of punishments for internal control violations have a positive impact in ensuring the adherence to the adopted internal controls.²⁴

Abubakar, (2013) also conducted a research in Nigeria that sought to analyse the impact that the internal control system had on the financial management within the public sector in Nigeria.²⁵ The research sought to address the problem of the prevalence of the unreliable financial records for the state owned parastatals within Nigeria. The research problem that the research sought to address was the fact that the faulty and inaccurate financial records led to the loss of integrity for these state parastatals. The research identified weak internal controls as one of the major factor that contributed to the presence inaccurate financial records thus leading to ineffective financial management within the public sector. The research resolved that the internal controls cannot eliminate all the risks associated with inaccurate financial reporting in the public sector in Nigeria. The research found out that the presence on an effective internal control system as being a key prerequisite for effective management and this is obtained by ensuring the integrity of the financial information that is provided by the organization. The research also proposed that the internal control system should be dynamic and subject to revisions from time to time to cater for emerging areas of weaknesses within the organization.

Gamage, Lock, & Fernando, (2014) conducted a research in Sri Lanka that sought to look at the effectiveness of the internal controls that have been adopted by state owned banks.²⁶ The research was conducted in form of an exploratory research that sought to look at the current internal controls that have been adopted by the banks in Sri Lanka and propose the best internal control

²⁴ Babatunde, S. A. (2013). Stakeholders' perception on the effectiveness of internal control system on financial accountability in the Nigerian public sector. *International Journal of Business and Management Invention*, 2(1), 16-33.

²⁵ Abubakar, M. G. (2013). Impact of Internal Control System in Public Financial Management in Nigeria.

²⁶ Gamage, C. T., Lock, K. L., & Fernando, A. (2014). A Proposed Research Framework: Effectiveness of Internal Control System in State Commercial Banks in Sri Lanka. *International Journal of Scientific Research and Innovative Technology*, 1(5).

framework should be adopted by the state banks. The research emphasized on the major role that is played by the internal controls in an organization. The research argued that effective internal controls in an organization ensure that its objectives are attained and also ensure compliance with the laid down laws and regulations. The research also noted that the internal controls also ensure that there is effective management of the business risk that poses a threat to the attainment of the objectives of the organization. The research proposed that an efficient internal control system should contain the five components as proposed by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). These five components constitute of; the control environment, risk assessment processes adopted by the organization, Control activities, Adequate Information and communication system and finally effective monitoring. The research concluded that the strengthening of the five components effectively strengthens the internal control system within the organization.

Badara & Saidin, (2013) took a different approach at analysing the internal control systems in the public sector.²⁷ They looked at the impact that effective internal control had on the effectiveness of the internal audit within local governments in Indonesia. The research was conducted on the backdrop of the increasing accounting scandals that had hit the global economy. They argued that these scandals could be attributed to the weak internal controls that existed in the affected firms. They argued that weak internal controls meant that the internal audit function within these firms was also weak. The research noted that the internal controls systems that were to ensure that there was assurance of reliability and accuracy in the financial reports had failed thus leading to the scandals. This research was in form of an explorative literature review and only looked at the impact of the effective internal controls on the effectiveness of the internal auditing. The focus of the research on only the effective internal controls was one of the weaknesses of this research. The research concluded that the effective internal control system at the local government level in Indonesia had a positive impact on the effectiveness of the internal audit function.

Akosile & Fasesin, (2013) did a comparative research that compared the internal control systems that were adopted by the public and the private universities.²⁸ The research was conducted

²⁷ Badara, M. S., & Saidin, S. Z. (2013). Impact of the Effective Internal Control System on the Internal Audit Effectiveness at Local Government Level. *Journal of Social and Development Sciences*, 1, 16-23.

²⁸ Akosile, A. I., & Fasesin, O. O. (2013). A Comparative Assessment of Internal Control System in Public and Private Universities in South-West, Nigeria. *Research Journal of Finance and Accounting*, 4(13), ISSN 2222-1697.

in universities located in South-Western Nigeria. The research conducted the research based on 12 universities in South-Western Nigeria with 6 private and 6 public universities being selected for the study. The research adopted a descriptive research approach and the collected data was analysed using multivariate variance analysis and by the use of the factor analysis technique. After analysing the collected data, the research concluded that there exists a lot of similarity in the internal control systems that have been adopted by the public and the private universities. The research did however note that in the private universities there were more instances of fusion of duties performed by the staff compared to the public universities.

This fusion of duties according to the research had a negative impact on the effectiveness of the adopted internal control systems that had been adopted by the universities (Akosile & Fasesin, 2013).²⁹ The research failed to find any evidence of the notion that the private universities were better funded than the public universities. The research did not find any significant evidence that the internal control systems were subject to being overridden by the management. The research noted that for both the public and the private universities the internal controls helped the universities in being more cost effective in their operations. The internal control systems adopted by the universities also promoted the attainment of the goals and objectives.

Gyebi & Quain, (2013) carried out a research that sought to analyse the effectiveness of internal controls adopted in relation to cash in Ghana.³⁰ The research was in form of a case study on the Electricity Company of Ghana Ltd located in Accra East. The research main objective was to establish the internal controls that had adopted by the electrical company to ascertain its effectiveness. The effectiveness was analysed both at the operational effectiveness level and in terms of the financial effectiveness that was gauged by the effectiveness of the cash collection as the proxy variable. The target population that the research focused on was composed of the staff that made up the management within the company and the tellers who were charged with the daily collection of the cash. The research found out that the presence of the internal control systems within the company could not guarantee that the goals and the objectives of the company could be guaranteed fully. The research noted that apart from the presence of effective internal controls the

²⁹ Akosile, A. I., & Fasesin, O. O. (2013). A Comparative Assessment of Internal Control System in Public and Private Universities in South-West, Nigeria. *Research Journal of Finance and Accounting*, 4(13), ISSN 2222-1697.

³⁰ Gyebi, F., & Quain, S. (2013). Internal Control on Cash Collection. A Case of the Electricity Company of Ghana Ltd, Accra East Region. *International Journal of Business and Social Science*, 4(9).

attainment of the organizational goals was influenced by other factors that include; Human judgement capabilities deficiencies, breakdowns in the internal control system and also the cost aspect may also be a limiting factor towards the development of an effective internal control system. The research also noted that in some instances the management had a leeway to override the internal control system thus limiting the effectiveness of the whole internal control system.

In another study (Morelo, 2011) analysed the importance of having internal controls in the public administration in Brazil. The research was conducted on the backdrop of the increasing importance of the public organizations in ensuring the attainment of specific government objectives. In Brazil just in other countries public parastatals are set up to foster the achievement of a particular government objective. The research noted that it's the presence of effective internal controls that ensure the attainment of these objectives by the state parastatals. The research argued that the internal controls act as a vehicle that ensure the delivery of these objectives. From the analysis conducted by the research it was clear that the presence of effective internal controls enhances the attainment of the objectives by the public corporations. The research also identified the segregation of duties as a major factor that promotes the effectiveness of internal controls.

2.3.2 Local Studies:

Wainaina, (2011) conducted a research in Kenya that evaluated the internal control function within the public sector in Kenya.³¹ The research was conducted on Kenya Polytechnic University College a state owned parastatal. The research was conducted using comparative research methodology that compared the internal controls framework within the Kenya Polytechnic University College with benchmark internal controls that exist in a reputable institution. The research identified six variables that formed the framework for an effective internal control system within the organization. The six components for an effective internal control included; risk assessment within the internal control system, control environment within the internal control system, control activities within the internal control system. Other variables included the information and communication in the system and the final two variables included the monitoring and information technology.

The research found out that some of the six key components required to ensure effective

³¹ Wainaina, S. W. (2011). An Evaluation of the Internal Control Function: The Case of Kenya Polytechnic University College.

internal control within the organization were not at their optimum levels. The research found out that the risk assessment mechanisms adopted by the university were not adequate. On the risk variable the research found out that the University needs to do more to ensure that more efficient risk assessment needs to be conducted to ensure that the university does not engage in activities that are beyond the benchmark risk levels. The research also noted that the information technology was one of the major impediments for the attainment of effective internal control system. The research proposed that the university should adopt more advanced information technology in more areas of operations to ensure that there are more effective internal controls. The research noted that there was adequate information and monitoring within the internal control system that needed to be maintained and enhanced further. In a nutshell the research noted the importance of internal controls in identifying areas of weaknesses early enough to ensure that appropriate action is taken by the organization.

Otieno & Nyangechi, (2013) carried out a research that sought to establish the effect of the effectiveness of the internal control procedures on the management of free primary education funds in Kisii, Kenya.³² The research was carried on the backdrop of increasing accusations of the free primary education being misappropriated. The research sought to find out if the nature and the extent of use of the internal controls led to the misappropriation of the free primary education funds. The main objective of the research was to find out the impact of the internal controls on the management efficiency of the free primary education funds. The research was formulated on the framework of the stewardship theory that emphasises on the adoption of integrity, transparency and accountability in management. The research selected a random sample composed of 117 respondents that was considered in the research. The research found out that the adoption of effective internal control measures had a positive impact on the management efficiency for the free primary education funds.

Onyango, (2014) carried out a research that sought to establish the impact that the internal controls had on the level of performance within the country governments in Kenya.³³ The main driver of this research was to establish the internal control strategies that promoted the

³² Otieno, S., & Nyangechi, E. O. (2013). Effectiveness of Internal Control Procedures on Management Efficiency of Free Primary Education Funds: a case of Public Primary schools in Kisii central District, Kenya. *Journal of Sociology and Social Work*, 1, 22-41.

³³ Onyango, R. O. (2014). Influence of Internal Controls On Performance of County Governments in Kenya.

enhancement of the effectiveness and efficiency in management within the county governments in Kenya. The main objective of the research was to establish the relationship that existed between the internal audit, information communication, risk assessment, control activities and the performance of the county governments. Both primary and secondary data was used in this research with primary data being collected using the use of questionnaires issued to the respondents that were from the finance department of the counties. The research found out that most of the counties do not follow the laid down internal controls as proposed by the auditor general. The research also found weaknesses in the separation of the duties performed by the respondents from the finance department. The authorization process was also found to be weak with poor reporting structured that all hindered the accountability. The research proposed the adoption of modern information systems to promote the effectiveness of the internal controls.

2.4 Summary of literature and Research Gaps

From the literature review we have identified three theories major theories that can be used to explain the nature of the internal control framework within organizations. The three main theories that give the theoretical underpinning to the practice of internal controls in organizations include; the agency theory; Reliability theory and the system theory. The agency theory is one of the oldest theory that proposes the development of an internal control system in form of a contractual framework between the principals and agents. Reliability theory treats the internal control as being influenced by the reliability of the parts that make up the internal control framework.

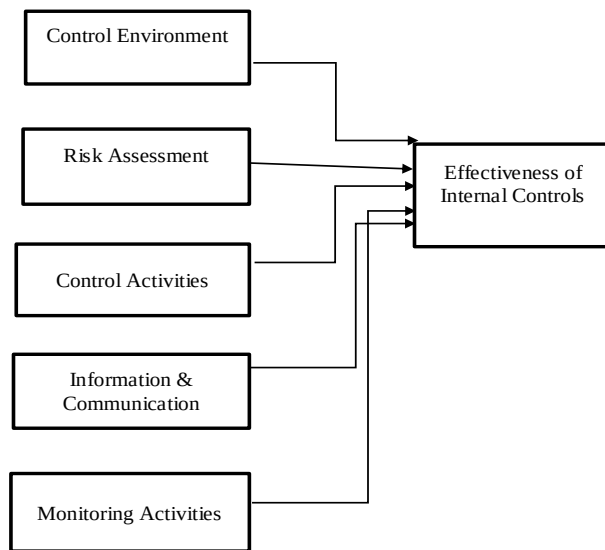
The System theory is the most effective theory that has been developed to base the formulation of the internal control system. The system theory approach is the most used theory as emphasized by the approach adopted by The Committee of Sponsoring Organizations of the Treadway Commission (COSO). From the literature review most studies have been conducted using the system approach. Few research work has been done in Kenya relating to the effectiveness of internal controls in state parastatals. The few studies that have been conducted in Kenya only focus on one parastatal and hence this research will seek to fill this research gap by considering several parastatals in one research.

2.5 Conceptual framework

This research will develop the conceptual framework based on the system theory approach as proposed by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).³⁴

Independent Variables:

Dependent Variable:



³⁴ The Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2013). *Internal Control-Integrated Framework (the 2013 Framework)*. The Committee of Sponsoring Organizations of the Treadway Commission (COSO).

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This is the third chapter of the research and deals with the research methodology that is used in the research. The chapter first spells out the research philosophy that was adopted by the research. After stipulating the research philosophy that was adopted by the research the research methods that were used in the research were also clearly defined. The population that was considered by the research will also be clearly defined. The sampling techniques that were used are then defined and the methods of data collection and analysis that were used will also be defined. The ethical considerations of the research will also be enumerated in this chapter.

3.2 Research design

This research combined the use of two research designs to meet its research objectives. The research used the descriptive research design in conjunction with application of the survey research design. The adoption of the two research design strategies enabled the research to conduct a much more in-depth research analysis. The survey research design will be essential in data collection aspects while the research will also adopt some aspects of the descriptive research design to gain a deeper understanding of the collected data.

3.2.1 Research Philosophy

This research is anchored on the positivism research philosophy which forms the basis for the basis for the development of the research design that is used by the research. The research philosophy refers to the beliefs and assumptions that guide the research. (Saunders, Lewis, & Thornhill, 2016).The research philosophy is defined by the nature of the following assumptions;Ontology;Epistemology and Axiology.Ontology defines the assumption of the philosophy on the nature of reality.Positivist philosophy assumes that only one form of reality exists and that the reality is independent from the respondents.On the basis of epistemology the the acceptable knowledge that is to be adopted by the research is the scientifically acceptable knowledge.

3.2.2 Research Approach.

There are two main research approaches that can be adopted in a research. The first approach is the deductive research approach. Deductive research approach begins with a well-defined theory and the research is conducted to test the research theory. The deductive research

approach leads to either approving the theory or rejecting the assertions of the said theory. The second research approach is the inductive research approach whereby the research is developed to come up with a new theoretical argument. Under the inductive approach a theory is developed from the analysis of the research data. This research will adopt the deductive approach whereby the research will seek to apply the COSO system theory as applied to state parastatals in Kenya. The research will seek to test the extent to which the effectiveness of the internal controls can be explained by the COSO system theory.

3.3 Theoretical Model Specification.

The research collected data that enabled the testing of the hypothesis indicated below. The research adopted the framework developed by Committee of Sponsoring Organizations of the Treadway Commission (COSO). The framework that was adopted by the research adopts the system approach prescribed by the COSO framework and looked at the five components that determine the effectiveness of the internal control system. The research hypothesis indicated below are developed on the basis of the COSO framework and the five internal system components are evaluated among the selected sample.

H₀: The control environment procedures within the state parastatals hinder the effectiveness of the internal controls.

H₁: The control environment procedures within the state parastatals promote the effectiveness of the internal controls.

H₀: The risk assessment procedures within the state parastatals hinder the effectiveness of the internal controls.

H₁: The risk assessment procedures within the state parastatals promote the effectiveness of the internal controls.

H₀: The control activities procedures within the state parastatals hinder the effectiveness of the internal controls.

H₁: The control activities procedures within the state parastatals promote the effectiveness of the internal controls.

H₀: The information & communication procedures within the state parastatals hinder the effectiveness of the internal controls.

H₁: The information & communication procedures within the state parastatals promote the effectiveness of the internal controls.

H₀: The monitoring activities within the state parastatals hinder the effectiveness of the internal controls.

H₁: The monitoring activities within the state parastatals promote the effectiveness of the internal controls.

The research will collect information on the following variables:

Dependent Variable:

Effectiveness of Internal Controls

Independent Variables:

- 1) Control Environment.
- 2) Risk Assessment.
- 3) Control Activities.
- 4) Information & Communication.
- 5) Monitoring activities.

3.4 Total Population

This target population constitutes an aggregation of all the respondents that satisfy the research criteria being used. The target population considered by this research will compose of the state parastatals in Kenya. The target population will constitute 187 state parastatals in Kenya as indicated below in table 3.1 below whereby the state parastatals in Kenya are classified into five distinct categories that include; Commercial state parastatals; Commercial state parastatals with a strategic function; Executive agencies; Independent state regulators and finally the Research institutions, tertiary institutions and other training institutions.

Table 3. 1 State Parastatals in Kenya Classification.

Item	Number
Commercial State Corporations	34
Commercial State Corporations with Strategic Functions	21
Executive Agencies	62
Independent Regulatory Agencies	25
Research Institutions, Public Universities, Tertiary Education and Training Institutions	45
Total Inventory of State Corporations as of 9 October 2013	187

3.5 Sampling Methodology.

The research adopted multi stage sampling technique where the following methodology was used to generate the sample used in the research. The sample development began from the selection of two state parastatals from each of the state parastatals categories indicated above in table 3.1 which shows the total population that was considered by the research. The target population was selected by the use of the convenient sampling and selected two parastatals per category. The target population was composed of the parastatals contained in table 3.2 below with two parastatals per category.

Table 3. 2 Target Population

Type state Parastatal	
1. Commercial state corporations	• New Kenya Co-operative Creameries (New KCC)
2. Commercial state corporations with a strategic function.	• Kenya Broadcasting Corporation(KBC) • Kenya Power and Lighting Company (KPLC) • National Oil Corporation of Kenya (NOCK)
3. Executive Agencies	• Kenya National Examination Council (KNEC)
4. Independent Regulators	• Kenya Tourist Board (KTB) • Central Bank of Kenya (CBK) • Media Council of Kenya
5. Research institutions & Public education institutions.	• University of Nairobi (UON) • Technical University of Kenya (TUK)

From each of the parastatal as sample composed of 15 respondents was drawn conveniently within the management section of the firm. The 15 respondents drawn from each parastatal formed the sample of 150 that was used to conduct the research analysis.

3.6 Data collection instruments

Data collection instruments entail all the tools that will be used by the research to gather all the information that will be used in the research. Development of the appropriate data collection instrument is essential if the research is to achieve its objectives (Saunders, Lewis, & Thornhill, 2016).The research will use primary data in its analysis.The research will use questionnaires to collect the required primary data from the state parastatals.

3.7 Data collection procedure

The research used the following procedure to collect data using questionnaires from the respondents from the state parastatals.

1. Development of questionnaires.
2. Issue of questionnaires to respondents in state parastatals.
3. Collection of questionnaires from state parastatals.
4. Cleaning and coding of data collected from the questionnaires.

3.8 Data analysis and presentation

The data was analyzed using the SPSS software package Version 23. The data will be presented using graphs plotted using SPSS and Microsoft Excel Version 2016.Descriptive data that will be analyzed will include ANOVA; Measures of central tendency, pie charts and frequency distribution tables. Principal component analysis will also be used in the data analysis.

CHAPTER FOUR:

DATA ANALYSIS AND PRESENTATION

4.1 Introduction.

This chapter presents the findings from the research after following the research methodology stipulated above. This chapter seeks to answer the research questions and meet the research objectives through application of the research methodology described above. Through the analysis we will be able to come to an understanding of the effect of the internal controls that have been adopted by state parastatals in Kenya. Through this chapter we will be able to find out the internal control procedures that are essential for the effectiveness of internal control systems. Through the detailed analysis in this chapter we will also be able to understand the performance of the internal control systems in Kenya using the COSO framework. The chapter will look at the five major components of the internal system as defined by COSO and analyze the performance of the internal controls for the state parastatals in Kenya on this basis. This chapter analyzes the control environment; risk assessment; control activities; Information & communication procedures and monitoring activities that exist within the state parastatals in Kenya. The research was conducted across a sample target population from 10 state parastatals in Kenya.

4.2 Descriptive Statistics.

4.2.1 Response Rate:

The research was conducted on a sample drawn from 10 state parastatals in Kenya. The research selected two state parastatals from the five main state parastatal categories as shown in the table below. Convenient sampling was then used to select a sample of 15 from each of the 10 selected state parastatals. The 150 respondents were selected from the state parastatals stipulated in the table 4.1 below. The sample was selected from the three key management classifications within the state parastatals. The sample was drawn from top management; mid-level management and junior level management. The 150 sample respondents were drawn from New Kenya Co-operative Creameries (New KCC), Kenya Broadcasting Corporation(KBC), Kenya Power and Lighting Company (KPLC), National Oil Corporation of Kenya (NOCK), Kenya National Examination Council (KNEC), Kenya Tourist Board (KTB), Central Bank of Kenya (CBK), Media Council of Kenya(MCK), University of Nairobi (UON) and Technical University of Kenya (TUK)

Table 4.1 State Parastatals classification

Type state Parastatal	Name of Parastatal
1. Commercial state corporations	• New Kenya Co-operative Creameries (New KCC)
2. Commercial state corporations with a strategic function.	• Kenya Broadcasting Corporation(KBC) • Kenya Power and Lighting Company (KPLC) • National Oil Corporation of Kenya (NOCK)
3. Executive Agencies	• Kenya National Examination Council (KNEC)
4. Independent Regulators	• Kenya Tourist Board (KTB) • Central Bank of Kenya (CBK) • Media Council of Kenya(MCK)
5. Research institutions & Public education institutions.	• University of Nairobi (UON) • Technical University of Kenya (TUK)

Source: Research (2016)

Table 4.2 Response Rate

Issued Questionnaires	Returned Questionnaires	Questionnaires Not-Returned	Response rate
150	137	13	91%

Source: Research Data (2016)

From table 4.2 above we can see that the research had a high response rate of 91%. The research was able to achieve this high response rate as the research questionnaires were sent through the email which is much easier to fill out than the manual forms. The research sent out 150 questionnaires to the 10 state parastatals with 15 questionnaires being sent to each state parastatal. Out of the 150 questionnaires that were sent out 137 were successfully returned and used for the analysis that will be presented in the upcoming sections. 13 of the sent questionnaires

were not returned by the respondents.

4.2.2 Respondents Demographics.

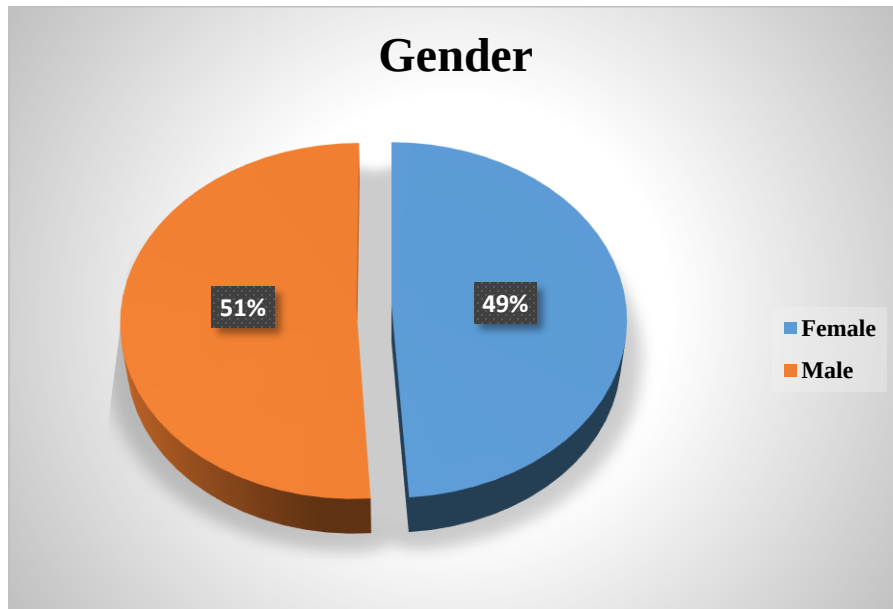


Figure 4. 1 Gender

Source: Research Data (2016)

Figure 4.1 above shows the distribution of the gender among the respondents considered by the research. The research had 137 respondents of which 67 were female representing 49% of the total respondents. The research respondents were made up of 70 males that is approximately 51%. The research had a good balance between the genders and hence avoided any issues that would have resulted from any gender bias. The gender distribution among the respondents is also explained further by table 4.3 below that gives the exact numbers per each gender and their distributions.

Table 4.3 Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	67	48.9	48.9	48.9
	Male	70	51.1	51.1	100.0

Total	137	100.0	100.0
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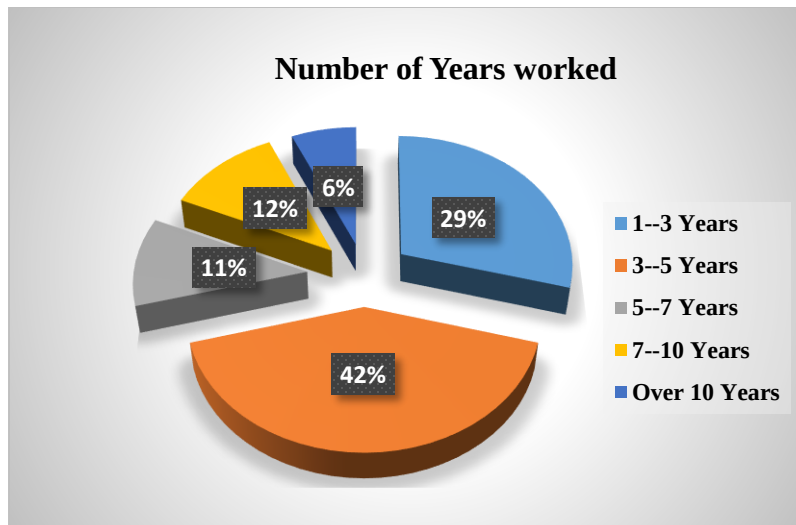
Source: Research Data (2016)

Table 4.4 Number of Years worked in the State Parastatal

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1--3 Years	40	29.2	29.2	29.2
3--5 Years	57	41.6	41.6	70.8
5--7 Years	15	10.9	10.9	81.8
7--10 Years	16	11.7	11.7	93.4
Over 10 Years	9	6.6	6.6	100.0
Total	137	100.0	100.0	

Source: Research Data (2016)

Table 4.4 above shows the distribution of the respondents in terms of the number of the years that they have worked for the state parastatals. From the data provided above in table 4.4 we can see that the number of the respondents that had worked between 1 and 3 years at that one parastatal were 40 respondents and this represents approximately 29 % of the total number of the respondents. The number of respondents that had worked between 3-5 years were 57 that is 42% of the respondents. Those that had worked between 5-7 years were 15 that is 11% of the total number of the respondents. The respondents that had worked between 7-10 years at the parastatal were 16 representing approximately 12% of the total respondents. Finally, the number of the respondents that had worked for over 10 years in the parastatal were 9 respondents representing approximately 6% of the total respondents considered by this research.



Source: Research Data (2016)

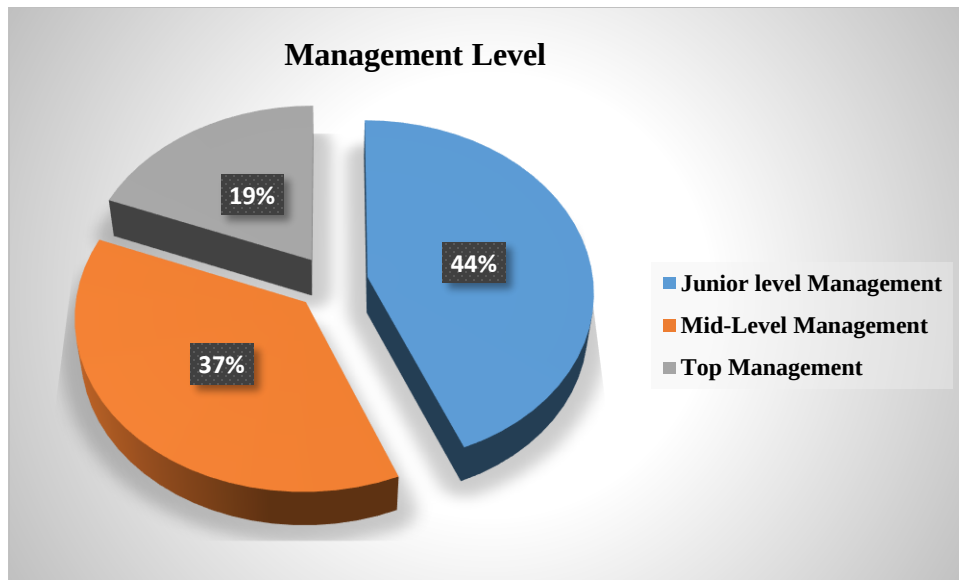
Figure 4.2 Number of Years worked.

Table 4.5 Management Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Junior level Management	60	43.8	43.8	43.8
	Mid-Level Management	51	37.2	37.2	81.0
	Top Management	26	19.0	19.0	100.0
	Total	137	100.0	100.0	

Source: Research Data (2016)

The research focused its analysis on the management level within these ten parastatals that were considered by this research. The research collected data from the respondents drawn from the top management within these parastatals; the mid-level management and the junior level management. Most of the respondents considered by this research came from the junior level of management with 60 of the respondents that is approximately 44 % of the respondents coming from this group. The mid-level management were 51 which constituted approximately 37% of the total respondents considered by the research. The top management at 26 constituted approximately 19% of the total respondents considered by this research.

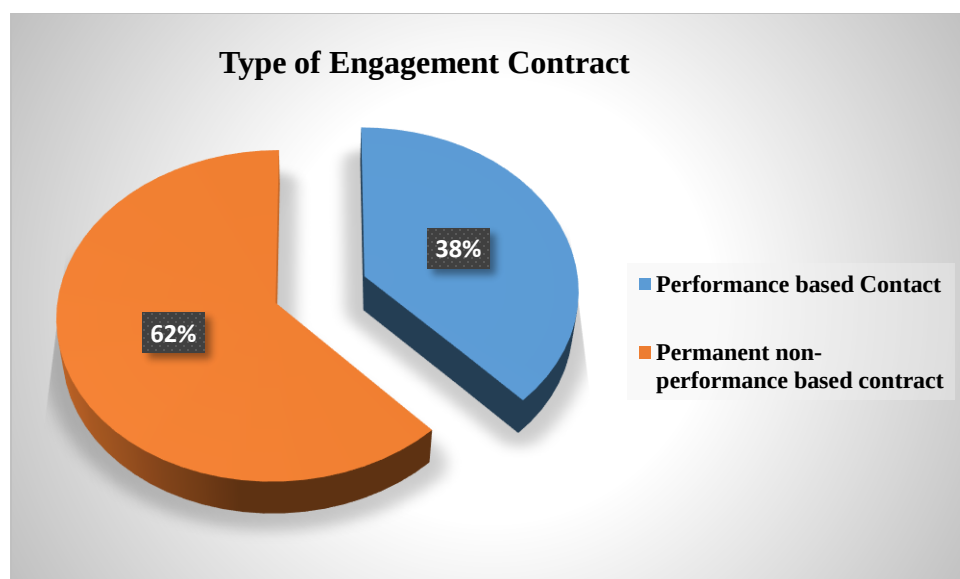


Source: Research Data (2016)
Figure 4.3 Management Levels

Table 4.6 Type of Engagement Contract

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Performance based Contact	52	38.0	38.0	38.0
	Permanent non-performance based contract	85	62.0	62.0	100.0
	Total	137	100.0	100.0	

Source: Research Data (2016)



Source: Research Data (2016)

Figure 4.4 Type of Engagement Contract

Table 4.6 and figure 4.4 show the distribution of the respondents in terms of the engagement contract that they had undertaken with the parastatal. From the data analysis 62 % of the respondents had been engaged by the parastatal based on the permanent non-performance basis with 38% being engaged on the performance basis. The distribution of the state parastatals that were considered by the research is as given below in table 4.7. The research focused on five categories of parastatals as shown in table 4.7. The five categories included; Commercial state corporations constituting 27 of the final respondents. Commercial state corporations with a strategic function were also 27 in the final data analysis. The respondents from the executive agencies parastatals were 28 with those from independent regulator type of parastatals being 27. Finally, Research institutions & Public education institutions respondents were 28 in number as per the final data analysis.

Table 4.7 State parastatal Classification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Commercial state corporations	27	19.7	19.7	19.7
	Commercial state corporations with a strategic function	27	19.7	19.7	39.4

Executive Agencies	28	20.4	20.4	59.9
Independent Regulators	27	19.7	19.7	79.6
Research institutions & Public education institutions	28	20.4	20.4	100.0
Total	137	100.0	100.0	

Source: Research Data (2016)

4.3 Inferential Statistics.

4.1 Reliability Test for the Data Used.

For any research data to be reliable the data has to have a high degree of internal consistency. The research used the Cronbach alpha to estimate the reliability of the data and the level of internal consistency and reliability of the scale used by the research. Table 4.7 below shows the Cronbach alpha for the data used in the research. The research had a Cronbach alpha of 0.844 or 84.4% which was high this indicating that there was a high degree of reliability and internal consistency of the data used in the research and hence this provides a good justification for reliance on the analysis of the data used by the research. The cutoff for reliability in terms of the Cronbach alpha is a Cronbach alpha of above 70% for the data used to conduct the analysis (Warmbrod, 2001).

Table 4.8 Cronbach Alpha-Case Processing Summary

Reliability Statistics			
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items
.844	.843		46

4.4 Internal Control System Analysis in State parastatals in Kenya.

This research sought to analyze the effectiveness of the internal controls that exist within the state parastatals in Kenya. To achieve this the research formulated various hypothesis that were to be tested and conclusions drawn from the research. The research adopted the COSO framework in the analysis of the internal control system within the state parastatals in Kenya. The research

adopted a framed various questions that were posed to the respondents considered by the research. The research sought to know how effective the internal controls were effective in terms of the five components as prescribed by the COSO framework. The research looked at five components that included; Control environment; Risk assessment; Control activities; Information and communication and finally the monitoring activities. The analysis below will look at the questions of focus for each of the components and the related questionnaire.

I Control Environment.

The control environment is the top tier if the COSO cube framework and it sets the tone for the whole internal control system that is adopted by the organization. The control environment component looks at the extent to which the organization promotes the development and maintenance of good ethical standard values within the organization. Control environment also looks at issues relating to the independence of the board and oversight issues within the organization. The component also deals with issues relating to the accountability within the organization. The research adopted a five point Likert scale from 1-5. Strongly Disagree was represented by 1, Disagree was represented by 2, Neutral was represented by 3, Agree was represented by 4 and Strongly agree was represented by 5. The views of the respondents were captured as indicated above and converted to numerical value as per the Likert scale notations and the table below show the average of the respondent's feedback for each question asked.

Table 4.9 Control Environment Questions.

	Mean	Std. Deviation	% In favour of questions proposition
1. There exists a well-established standard of conduct that guides integrity and ethical values.	4.029	1.0498	80.58
2. There are sufficient strategies put in place to evaluate and ensure adherence to the established standards of conduct.	3.839	.9794	76.78
3. The board of has established effective oversight responsibilities within the parastatal.	4.131	1.2116	82.62

4. There is a high degree of independence between the board of directors and the management.	2.803	1.4894	56.06
5. The board of directors takes sufficient steps to ensure that the parastatal has adequate expertise in all sections.	4.109	1.0480	82.18
6. There exists clearly defined organizational structure within the parastatal.	2.927	1.6208	58.54
7. There exists well defined reporting structure within the parastatal.	2.518	1.4708	50.36
8. Authority and responsibilities within the parastatal are clearly defined.	3.139	1.4047	62.78
9. The parastatal has put in place adequate measures that ensure that it attracts the right personnel and is able to retain them.	3.971	1.0843	79.42
10. There exists an adequate framework to identify and alleviate any personnel deficiencies both in terms of quality and quantity.	4.007	1.1213	80.14
11. The parastatal has a well-defined and clear succession plan.	2.606	1.6241	52.12
12. There exists an appropriate framework that disciplines and rewards the staff's performances in relation to their objectives.	3.686	1.3599	73.72

Source: Research Data (2016)

With a mean Likert response rate of 4.029 most of the respondents supported the proposition for the existence of standards of conduct that guide the integrity and practice of ethical values within the respective parastatals. This means that in most of the parastatals there existed appropriate standards that were formulated to guide the integrity within the state parastatals. At a mean of 3.8 most of the respondents supported the proposition that there existed strategies to support the adherence to the standards of integrity and ethics within the parastatals. It is important to note here that the standards of integrity and ethical values are essential to any effective internal control system. With a mean Likert scale score of 4.13 most of the respondents supported the idea that there existed effective oversight structures within the state parastatals and oversight is an essential catalyst that enhances the effectiveness of the set up internal controls within the state parastatal. Most of the respondents from the research did not believe that there was adequate independence between the board of directors and the management and this is illustrated by the low mean Likert scale score of 2.8. The independence between the board and the management is essential for any implementation of successful and lack of independence means that the board will

be interfering with the affairs of the management thus hindering the management's ability to implement and operationalize the internal control strategies.

The research found out that there existed sufficient strategies put in place by the management to ensure that enough personnel existed at the various sections within the firm. This was identified as one of the strongest features within the control environment component with a mean Likert response rate of 4.1. From the respondent's feedback there were some weaknesses in the organizational structures that are adopted by the state parastatals in Kenya. Over 40 % of the respondents were of the view that there was lack of a clearly defined organizational structure within the organization. This is illustrated by the mean Likert score of 2.927 for this question relating to the organizational structure. Lack of clear reporting structures within the state parastatals was also identified as another weakness in the control environment component. This is illustrated by the mean Likert score of 2.518. Approximately 37% of the respondents believed that the authority and responsibilities were not clearly defined and this represents another weakness to the internal control system within the control environment component.

Majority of the respondents believed that their parastatals had put in place enough strategies to attract and retain the right personnel with 79.42% supporting this assertion. Most of the parastatals also had adequate ability of identifying any personnel deficiencies and put in place adequate measures to address the deficiencies with 80.14 in support of this assertion based on the mean Likert score for this question. Most of the respondents were of the view that there lacked a clear succession plan within their organizations that had a negative impact on the internal controls effectiveness with a mean Likert score of 2.606. Lack of a clear succession plan leads to instability in terms of accountability to the internal control strategies and also negatively impacts on the continuity of the internal control strategies. Most of the respondents supported the notion that there existed appropriate strategies to punish and promote the adherence to the duties and obligations of the staff within the state parastatals as indicated by the high mean Likert score of 3.686.

II Risk Assessment.

Under the risk assessment component, the management is able to adopt various strategies to help manage and mitigate both the internal and external risks that the organization is faced with. Under the risk assessment component, the research sought to find out if the state parastatals had put in place the required strategies to manage and mitigate the risk that is faced

by the organization both internally and from external sources of risks. The questions contained in table 4.9 below indicate the research assessment capabilities of the state parastatals.

Table 4.10 Risk Assessment Questions.

	Mean	Std. Deviation	% In favour of questions proposition (Based on Mean Likert Score)
1. The objectives are clearly specified in all aspects of the parastatal.	3.314	1.3436	66.28
2. The parastatal uses risk analysis appropriately as a guiding tool when allocating funds externally.	2.781	1.3597	55.62
3. There is a high degree of compliance with the relevant accounting standards.	3.562	1.1039	71.24
4. There is a high degree of compliance with the relevant standards that impact on the parastatal.	3.693	1.1917	73.86
5. The parastatal has a high degree of adherence to external laws and policies.	3.664	1.3894	73.28
6. There exists effective framework for risk identification.	2.898	1.6009	57.96
7. There are adequate measures that have been put in place to respond to the various risks.	2.818	1.5302	56.36
8. There exists appropriate fraud detection and mitigating strategies.	2.416	1.5701	48.32
9. The parastatal carries out continuous environmental analysis to identify emerging risk areas.	2.416	1.3320	48.32
10. There is continuous risk assessment of the various changes that could have an impact on the internal control system.	2.839	1.3130	56.78

Source: Research Data (2016)

From table 4.9 above we have the mean Likert scores for the various questions that were posed to the respondent based on the risk assessment component within their state parastatals. From the research just above half of the respondents were in support of the proposition that there existed well defined objectives within the firm as indicated by the mean Likert scale score of 3.314. This indicates that although the objectives were to some extent defined within the parastatals there was lack of clarity in the definition of the objectives within the parastatal. For a properly functioning internal control system there has to be clarity in the definition of the objectives for all the personnel and stakeholders that interact with the organization. There was weak support for the

notion that the parastatals effectively adopted risk analysis when allocating funds externally with the mean Likert score of 2. 781. This lack of wide scale use of risk analysis when allocating funds externally leads to waste and allocation of funds to sub-optimal purposes that hinder achievement of the firm's objectives.

Majority of the respondents supported the proposition that there existed adherence towards the accounting standards reporting within the parastatal with a mean Likert score of 3. 562. This adherence towards the accounting standards should be enhanced even further to promote further the effectiveness of the internal controls within the state parastatals. According to the research most of the parastatals were also in compliance with other relevant standards that impact on the parastatals operations with a mean Likert score of 3. 693. Majority of the parastatals also adhered to the laws and policies that govern them with a mean Likert score of 3. 664. With a low mean Likert score of 2.898 there was inadequate risk identification strategies adopted by the various state parastatals and this was a major weakness identified by this research in relation to this component relating to the risk assessment. The research also found out that there were weak strategies that had been put in place by the parastatals to respond to the various risks.

The research identified the major weakness within this section as the lack of the adequate fraud detection and mitigating strategies with a low mean Likert score of 2. 416. This means that the parastatals were exposed to risk of fraud which has a negative impact on the internal control system adopted by the parastatals. The parastatals also had put in place poor environmental risk scanning strategies as indicated by the low Likert score of 2. 416. This exposes the parastatals to environmental borne risks that the firm is unable to respond to effectively. The state parastatals also scored poorly in terms of the risk assessment strategies relating to the entire internal control system as indicated by the poor mean Likert score of 2.839.

III Control Activities.

The next component of the internal control system that the research focused on was the control activities. This is the component that is responsible with ensuring that the policies and the mitigating strategies proposed by the management and the board are implemented. This is the component that is responsible for operationalizing the internal control system strategies. The questions stipulated below in table 4.10 seek to find out the strength of the control activities component within the state parastatals in Kenya.

Table 4.11 Control Activities Questions.

	Mean	Std. Deviation	% In favour of questions proposition (Based on Mean Likert Score)
1. There is a high degree of integration of the risk assessment in the entire internal control system.	2.445	1.3335	48.9
2. There is a high degree of segregation of duties and roles within the parastatal.	2.095	1.3606	41.9
3. There exist sufficient mitigating strategies for any risk that the parastatal may experience.	2.438	1.2768	48.76
4. There are well established controls built into the technologies that have been adopted by the parastatal.	2.606	1.4968	52.12
5. The parastatal ensures that the relevant technologies key for internal controls are acquired.	3.511	1.2194	70.22
6. There exists relevant security management in all the areas of the parastatal.	3.015	1.2890	60.3
7. There exist well developed policies to ensure that management control directives are implemented.	2.591	1.2866	51.82
8. There exists effective accountability and responsibility in executing the internal control policies.	2.650	1.3590	53
9. There exists an appropriate framework to initiate corrective action whenever an anomaly in the internal controls is identified.	2.314	1.3381	46.28

Source: Research Data (2016)

From the analysis of the research data from respondents drawn from the various parastatals various insights were made from the analysis of the respondent's responses. Few of the respondents supported the proposition that there was a high degree of integration of risk assessment in the entire internal control system. This was indicated by the low mean Likert score of 2.445 as indicated in table 4.10 above. This is one of the weaknesses of the internal control system under the control activities that needed to be addressed within the state parastatals in Kenya. The major weakness identified by this

research was the weakness in the segregation of duties and roles within the state parastatals in Kenya. This was indicated by the low mean Likert score of 2.095 with most of the respondents saying that there was weak segregation of duties and roles with some form of overlapping duties and roles.

The research also found out that there were weak mitigation strategies that were put in place to combat the risk faced by the parastatals with a low mean Likert score of 2.438. Most of the respondents supported the assertion that adequate technologies key for internal controls had been adopted by the parastatals with a mean Likert score of 3.511. There were relevant security management strategies within the parastatals with a mean Likert score of 3.01 but more could be done. The parastatals were also found to have a poor framework to ensure that the management directives were implemented by the relevant personnel with a low mean Likert score of 2.59.

There was also weakness in terms of the required accountability necessary for operationalization of the internal control system as indicated by the low mean Likert score of 2.65. Most of the respondents that were considered by the research did not support the proposition of the existence of appropriate framework to respond to any anomalies identified within the internal control system. This was indicated by the low mean Likert score of 2.314 and this means that the parastatals are not able to effect corrective actions appropriately and on a timely basis and this negatively impacts on the performance of the whole internal control system as a whole.

IV Information and Communication.

Information and communication is a very critical component of the internal control system. Effective information and communication framework ensure that there is efficient flow within the organization. Under this section the respondents were asked questions to gauge the effectiveness of the information and communication framework adopted by the parastatals to promote the effective operationalization of the internal control strategies. Effective information and communication is key for information processing and in relaying feedback for any corrective actions that have been undertaken by the organization relating to the internal controls.

Table 4.12 Information and Communication Questions.

	Mean	Std. Deviation	% In favour of questions proposition (Based on Mean Likert Score)
1. The parastatal continuously updates its information and communication systems with advancement in technology.	4.080	1.1052	81.6
2. The existing information and communication ensures accurate capture of both internal and external data.	2.993	1.4975	59.86
3. There is high quality processing and accurate dissemination of the data.	3.431	1.4440	68.62
4. Cost and benefit analysis plays a major role in the decision making of the information and communication tools that are to be adopted.	2.620	1.6366	52.4
5. There exists effective communication of the internal control information in the parastatal between board, management and other staff members.	2.511	1.1639	50.22
6. There is a high degree of separation of the communication lines among the various stakeholders in the firm.	3.161	1.3625	63.22
7. There exists effective inbound to the parastatal.	2.350	1.3262	47
8. There exists effective outbound communication to external parties.	2.861	1.4203	57.22

Source: Research Data (2016)

From table 4.11 above we can see the various propositions that were made regarding the information and communication component within the internal control system. Most of the respondent supported the proposition that the parastatals continuously updated their information and communication strategies with emerging technologies and needs. This high support was clearly indicated by the high mean Likert score of 4.080 which is the highest under this component. Majority of the respondents also supported the proposition that the information and communication strategies adopted by the parastatals enhanced accurate capture of both internal and external data with a Mean Likert score of 2. 993. Most of the respondents also supported the proposition of the existence of high information processing capabilities with a high Mean Likert score of 3.431.

The research also found out that there was a weakness in the use of the cost and benefit analysis in decision making regarding the information and communication tools to be adopted with a low mean Likert score of 2. 620. This means that there was a greater probability of misuse of funds in the acquisition of information and communication tools. From the low mean Likert score of 2.511 the research found out that there existed weak effective communication. The research also found out that there was some strength in the communication lines with a Likert score of 3.161 but this could be enhanced further to promote better internal controls operationalization. The research also found that both inbound and outbound communication was not that strong but inbound communication performed worse than the outbound communication.

V Monitoring Activities.

This is the component within the internal control system that ensures that all the other components do indeed exist and are functioning at their optimum levels. This ensures that there is constant feedback to the management about the actual performance of the whole information system. The monitoring activities ensure that each of the other component does indeed exist within the internal control system and function as intended. Table 4.12 looks at the various aspects of monitoring activities that are essential for an effective internal control system. The research under this component sought to establish the nature and the dynamics of the monitoring activities that existed within the state parastatals in Kenya.

Table 4.13 Monitoring Activities Questions.

	Mean	Std. Deviation	% In favour of questions
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			proposition (Based on Mean Likert Score)
1. There exist effective monitoring activities that identify that internal control components are present and functioning as expected.	2.460	1.4553	49.2
2. There is continuous evaluation of the operation of the internal control system.	2.277	1.4689	45.54
3. There exist appropriate personnel both in terms of numbers and skill sets to undertake the monitoring of the internal control system.	2.489	1.3291	49.78
4. There exists a high degree of objectivity in the evaluation of the operation of the internal control system.	2.672	1.5629	53.44
5. Internal controls deficiencies are communicated in a timely manner to the relevant parties.	2.781	1.5658	55.62
6. There is an effective assessment of the corrective measures to ensure that they are having the desired effect.	2.409	1.4929	48.18

Source: Research Data (2016)

From the research we can note the following in relation to the monitoring component in state parastatals in Kenya. The research found that a majority of the respondents felt that there were inadequate monitoring activities adopted by the parastatals as indicated by the low mean Likert score of 2. 460. The monitoring activities were deficient both in terms of the actual presence and in terms of the quality of the implemented monitoring activities. The research also found out that continuous evaluation of the internal control system was weak with a low mean Likert score of 2. 277. Lack of adequate internal control checks mean that any anomaly will not be identified on a timely manner thus leading to inefficient internal control system.

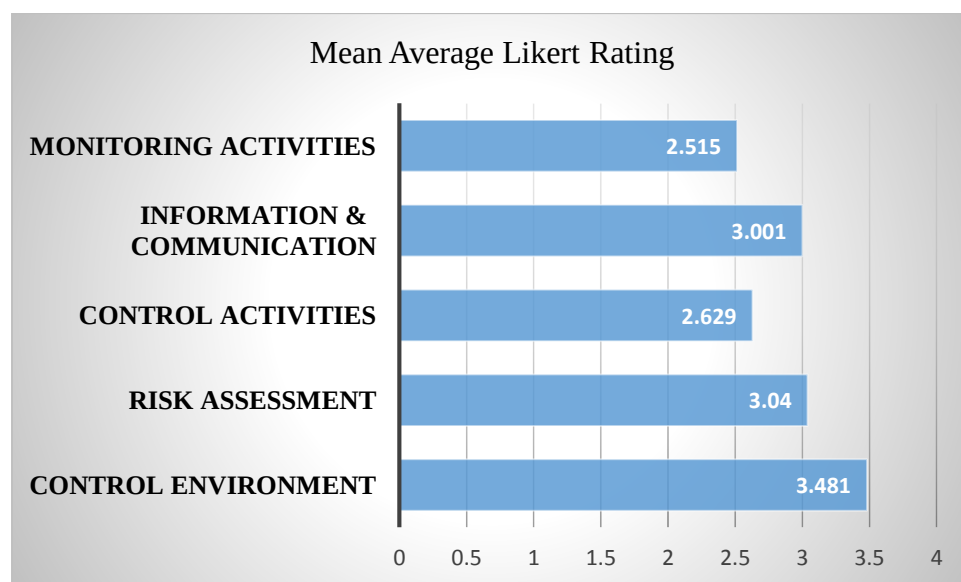
The research also identified the lack of the adequate personnel in terms of numbers and skill set another poorly performing aspect within the monitoring activities component with a low mean Likert score of 2. 489. There was also some weaknesses in terms of the objectivity in the monitoring activities that were adopted by the parastatals and ineffective timely communication within the internal control system. The parastatals also had ineffective assessment strategies for the adopted corrective measures to gauge if they were having the desired effect.

4.5 Hypothesis Results.

Table 4.14 Mean Average Likert Rating.

	Mean Average Likert Rating
Control Environment	3.481
Risk Assessment	3.040
Control Activities	2.629
Information & Communication	3.001
Monitoring Activities	2.515

Source: Research Data (2016)



Source: Research Data (2016)

Figure 4.5 Mean Likert Rating score.

The research uses a five point Likert scale with the following specifications;

1-Strongly Disagree; 2-Disagree; 3-Neutral; 4-Agree and 5-Strongly Agree

For the hypothesis testing to hold true we will use the above Likert scale to make the conclusions regarding the hypothesis testing.

The research adopted a five point Likert scale where we had 1 representing respondents that strongly Disagreed with the proposition made by the research questions in the questionnaire. 2 represented agreeing with the proposition of the questionnaire question. 3 represented those that

felt neutral or indifferent to the proposition being made. 4 represented agreeing with the proposition being made and finally Strongly agreeing was represented by 5. It is on this basis that we will make conclusions regarding the hypothesis questions being considered by the research.

Hypothesis I: Control Environment.

H₀: The control environment procedures within the state parastatals hinder the effectiveness of the internal controls.

H₁: The control environment procedures within the state parastatals promote the effectiveness of the internal controls.

The first null hypothesis proposed that the control environment within the state parastatals hindered the effectiveness of the internal controls within the state parastatals. The hypothesis testing conclusion will be drawn on the basis of the average Likert scale score for the propositions made regarding the control environment. The mean Likert score provides the average of the view of the respondents regarding the effectiveness of the control environment component within the internal control system. From the research findings the average Likert score for the control environment component was 3.481 which means that on average the respondents felt neutral and indifferent that the control environment hindered the effectiveness of the internal controls. Based on this the null hypothesis was subsequently accepted as the control environment procedures had hindered the effectiveness of the internal controls within the state parastatals.

Looking at the analysis more deeply we can see that among the 12 propositions posed to the respondents only 4 were sufficient in promoting effectiveness of the internal control system. The four aspects that the respondents felt were sufficient included; well established standards of conduct to guide integrity and ethics within the parastatals. The established board oversight in the state parastatal was also sufficient in promoting the effectiveness of the internal controls with an average Likert score of 4.131. There were also sufficient steps taken by the board to ensure that adequate personnel were engaged at key areas within the parastatal with a mean Likert score of 4.109. Adequate measures to identify and alleviate personnel deficiencies were also present within the parastatals according to the respondents with a mean Likert score of 4.007.

Hypothesis II: Risk assessment.

H₀: The risk assessment procedures within the state parastatals hinder the effectiveness of the internal controls.

H₁: The risk assessment procedures within the state parastatals promote the effectiveness of the

internal controls.

The second null hypothesis proposed that the risk assessment within the state parastatals hindered the effectiveness of the internal controls within the state parastatals. The hypothesis testing conclusion will be drawn on the basis of the average Likert scale score for the propositions made regarding the risk assessment. From the research findings the average Likert score for the risk assessment component was 3.04 which means that on average the respondents felt neutral and indifferent that the control environment hindered the effectiveness of the internal controls. Based on this the null hypothesis was subsequently accepted as the risk assessment procedures hindered the effectiveness if the internal controls within the state parastatals.

The respondents were asked ten questions regarding various prerequisites necessary for the risk assessment component to be sufficient for the effectiveness of the internal controls. For all of the requirements the respondents did not support the presence of any of the prerequisites in this component. Only the adherence to the standards external laws and policies were close to being sufficient for the enhancement of the effectiveness of the internal controls.

Hypothesis III: Control activities.

H₀: The control activities procedures within the state parastatals hinder the effectiveness of the internal controls.

H₁: The control activities procedures within the state parastatals promote the effectiveness of the internal controls.

The third null hypothesis proposed that the control activities within the state parastatals hindered the effectiveness of the internal controls within the state parastatals. The hypothesis testing conclusion were drawn on the basis of the average Likert scale score for the propositions made regarding the control activities. From the research findings the average Likert score for the control activities component was 2.629 which means that on average the respondents disagreed that there were effective control activities required for effective internal controls. Based on this the null hypothesis was accepted and it was concluded that the control activities within the state parastatals did indeed hinder the effectiveness of the internal controls within the state parastatals. Only the relevant technologies at 3.511 came close to being sufficient for the effectiveness of the internal controls to be guaranteed.

Hypothesis IV: Information & communication.

H₀: The information & communication procedures within the state parastatals hinder the

effectiveness of the internal controls.

H₁: *The information & communication procedures within the state parastatals promote the effectiveness of the internal controls.*

The fourth null hypothesis proposed that the Information & communication within the state parastatals hindered the effectiveness of the internal controls within the state parastatals. The hypothesis testing conclusion was drawn on the basis of the average Likert scale score for the propositions made regarding the Information & communication. From the research findings the average Likert score for the Information & communication component was 3.001 which means that on average the respondents felt neutral and indifferent that the Information & communication hindered the effectiveness of the internal controls. Based on this the null hypothesis was subsequently accepted and conclusion made that indeed the Information & communication procedures within the state parastatals hindered the effectiveness of the internal controls.

Hypothesis V: Monitoring activities.

H₀: *The monitoring activities within the state parastatals hinder the effectiveness of the internal controls.*

H₁: *The monitoring activities within the state parastatals promote the effectiveness of the internal controls.*

The fifth null hypothesis proposed that the Monitoring activities within the state parastatals hindered the effectiveness of the internal controls within the state parastatals. The hypothesis testing conclusion was drawn on the basis of the average Likert scale score for the propositions made regarding the Monitoring activities. From the research findings the average Likert score for the Monitoring activities component was 2.515 which means that on average the respondents disagreed that the necessary monitoring activities procedures existed to ensure the effectiveness of the internal control system.

CHAPTER FIVE:

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction.

This is the last chapter of the research and under this chapter focus is placed on synthesizing the major findings from the research by giving a brief summary of the major issues of focus that the research sought to address. Under the summary the research problem that promoted the researcher to carry out this is highlighted and the main stance of focus considered by the research is also looked at. The methodologies used and major lessons from literature review is also highlighted under this section. This chapter also looks at what conclusions can be drawn from the research. The chapter further makes policy recommendations from the research findings analysis. The chapter finally concludes by looking at the areas where further research in this subject area may be conducted.

5.2 Summary and Major findings.

The research began by conducting an in-depth analysis of the history of the internal control within organizations. The focus of internal controls within organizations gained increased focus after the collapse of some major companies globally which after analysis was attributed to internal control weaknesses. Three key commissions have been at the forefront of pushing the internal control agenda globally. The three commissions include the Treadway Commission, MacDonald Commission and Cadbury Commission in the United States, Canada and United Kingdom respectively. This research was conducted on the backdrop of increasing importance of internal controls to the attainment of the objectives of the organization and more so on the state parastatals which control a huge percentage of resources.

The research sought to investigate why the performance of state parastatals in Kenya remained poor despite the steps that have been taken to promote and facilitate the application of the internal controls within the state parastatals. State parastatals in Kenya continue to face the following challenges; first the state parastatals have had increasing levels of debt. To add to the

problem of increase in the debt undertaken by the parastatals the parastatals have also been faced with problems of mismanagement that has led to fraud instances and collapse of some major parastatals in Kenya. The basis of conducting this research is to provide a detailed insight into the problem of weak internal controls that have dogged the state parastatals in Kenya.

The research argued that the internal control within organization could be explained by three major theories; the first theory is the agency theory that emerged from the field of economics. Agency theory explains the nature of the relationship that exists between the principals and the agents that act on behalf of the principals. The agency theory enables the creation of accountability based relationship between the principal and the agent. The nature of the relationship that is established by the agency theory is a contract based relationship that has been formalized and this means that the agent is bound to act in the best interests of the principals who are the owners of the organization.

The other major theory that could be used to explain the internal control issues is the Reliability Theory. The reliability theory owes its emergence to the maritime and life insurance industry in the 19th century that used the reliability theory to compute the most profitable rate to charge their clients. The reliability theory proposes that the internal control system within an organization is made up of various control components that are interrelated and interlinked to each other. The reliability theory proposes that the internal control system within an organization is said to be working effectively if all the elements are successful in fulfilling their desired function.

The final and the major theory that can be used to explain the internal control within organizations is the System Theory. The development of the system theory was fundamental in the development of the framework of understanding complex phenomena relating to the internal controls. This was enabled by the ability of the system approach to breakdown the complex phenomena into smaller parts which could be understood. After understanding the small parts, the large complex phenomena could be deciphered by the aggregation of the understanding of the small parts. The Committee of Sponsoring Organizations of the Treadway Commission (COSO) in 1992 formed the main reference benchmark for internal controls adoption in businesses. (COSO) defined internal controls as a process that provides assurances regarding the attainment of the organization objective.

The (COSO) 1992 framework sought to provide assurance by ensuring the following; the framework sought to ensure that there was reliability in the financial reports produced by the

organizations. The framework also sought to ensure that there was efficiency and effectiveness within the organization operations. Finally, the framework was to ensure that there was compliance with the relevant policies and laws.

According to the revised framework proposed by (The Committee of Sponsoring Organizations of the Treadway Commission (COSO), 2013) internal control is constituted of five key components that include;Control environment;Risk assesment;Control activities;Information & Communication and monitoring activities.

- **Control Environment:** The top management set forth the agenda on the importance of having effective internal controls within the organization. The nature and form of the control environment that is practiced by the organization is borne from the organizations values and beliefs. It is at this level that all the prerequisite resources that facilitate internal control are provided from the technical, physical and human capital resources.
- **Risk Assessment:** The risk assessment within the internal control system is in charge of identification and assessment of any possible risks that may face the organization thus hindering the achievement of goals and objectives. The risk assessment assigns objectives to various sections of the organization and carries out a dynamic analysis of all the risks that may hinder the achievement of the objectives. Risk assessment is also charged with identifying any fundamental risks that may have an impact on the broad system of internal controls in the organization.
- **Control Activities:** Control activities include all action that are captured in the organizations procedures and policies that seek to ensure that all the proposed mitigating measures proposed by the management are enforced and implemented. Under this the management proposes mitigating measures for all the potential risks that may face the organization.
- **Information & Communication:** Information and communication ensure that there is effective communication within the organization and from outside the organization. This enables the organization become a learning system that is dynamic enough to be able to react to any emerging risks. This is the component that ensures that there is timely and quality information that facilitates effective internal controls. This also helps all within the organization to be able to know their roles and obligations within the internal control system.

- **Monitoring Activities:** This ensures that there is constant feedback to the management about the actual performance of the whole information system. The monitoring activities ensure that each of the other component does indeed exist within the internal control system and function as intended. The monitoring activities also help to identify emerging threats and risks that have not been factored in by the internal control system.

MAJOR FINDINGS:

The research was conducted to determine the level of effectiveness of the internal control system within state parastatals in Kenya and the following were the major findings that were drawn from the research:

- The first major finding from the research was that the internal control system within the state parastatals in Kenya was found to be ineffective with an average Likert score of 2.9332 for the internal control system as a whole.
- All the five internal control components from the control environment; risk assessment; control activities, information and communication and monitoring activities were all deemed to hinder the effectiveness of the internal control system.
- Among the five components considered in the research analysis the control environment component was found to be the most effective component in terms of the necessary prerequisites for an effective internal control system. Control environment had a mean Likert scale rating of 3.481.
- The monitoring activities component with a mean Likert score of 2.515 was the weakest internal control system component.
- In terms of the strength of the five components the following order held true in the research; Control environment was the strongest followed by Risk assessment, Information and communication, control activities with monitoring activities being the weakest component.
- All the null hypotheses were accepted with all the components hindering the effectiveness of the internal control system.

Top five -Worst rated propositions

Component based propositions	Mean Likert Score
III: Control Activities [2 There is a high degree of segregation of duties and roles within the parastatal]	2.095
V: Monitoring Activities [2 There is continuous evaluation of the operation of the internal control system]	2.277
III: Control Activities [9 There exists an appropriate framework to initiate corrective action whenever an anomaly in the internal controls is identified]	2.314
IV: Information and Communication [7 There exists effective inbound to the parastatal]	2.350
V: Monitoring Activities [6 There is an effective assessment of the corrective measures to ensure that they are having the desired effect]	2.409

The above table indicates the worst rated propositions of the research made by the respondents. The above indicates the five weakest features within the internal control system within the state parastatals in Kenya. From the research inadequate segregation of duties within the parastatals was identified as the major factor hindering the effectiveness of the internal controls within the state parastatals. Weak evaluation of the internal control system was also another factor hindering the effectiveness of the internal control system. Lack of an effective framework to initiate corrective action also hindered the effectiveness of the internal control system. Weak inbound communication to the parastatals also hindered the effectiveness of the internal control system in the state parastatals.

Top five -Best rated propositions

Component based propositions	Mean Likert Score
I: Control Environment [10 There exists an adequate framework to identify and alleviate any personnel deficiencies both in terms of quality and quantity]	4.007

I: Control Environment [1 There exists a well-established standard of conduct that guides integrity and ethical values]	4.029
IV: Information and Communication [1 The parastatal continuously updates its information and communication systems with advancement in technology]	4.080
I: Control Environment [5 The board of directors takes sufficient steps to ensure that the parastatal has adequate expertise in all sections]	4.109
I: Control Environment [3 The board of has established effective oversight responsibilities within the parastatal]	4.131

The above table shows the five top factors that were well established in the internal control system and they indeed facilitated the effectiveness of the internal control system. Effective board oversight was the top performing factor followed by adequacy of personnel within the parastatals. Parastatals also updated their information and communication system that promoted the effectiveness of the internal controls. There were also well established standards of conduct within the parastatals that promoted the effectiveness of the internal controls. The framework for identifying and alleviating personnel deficiencies was also well developed in most parastatals.

5.3 Conclusion.

The research sought to analyze the effectiveness of the internal control systems within the state parastatals in Kenya. The research sought to find out the nature and dynamics of the effectiveness of the internal controls that have been adopted by state parastatals in Kenya. The research was conducted on the backdrop of the the problem of weak internal controls that have dogged the state parastatals in Kenya. The research was necessitated by the fact that very few research work has been carried out to analyse the internal control effectiveness in the state parastatals in Kenya. The few research work that has been carried out only focuses on a single parastatal. This research will adopt a multi firm approach and this will enable the development of an integrated understanding of the weakness of the internal controls in parastatals in Kenya.

The research adopted a multi firm analysis and data was collected from 10 state parastatals and the data was collected by the use of questionnaires and data analysed using IBM SPSS analytical software version 23. The research adopted the COSO framework in formulating the

theoretical framework for the research. The research sought to test strength of the five COSO framework components among the state parastatals in Kenya. After the analysis the research noted the following key findings: The control environment was the strongest component within the COSO framework for internal control system from the data analyzed for the state parastatals in Kenya. The control environment component was present in most of the state parastatals that were analyzed and performing well as indicated by the high mean Likert scale score of 3.481. On the other hand The monitoring activities was the weakest among the five internal control components considered in the analysis with a low average mean Likert score of 2.515. From the research all the null hypothesis were accepted with all the components being deemed to hinder the effectiveness of the internal controls in the state parastatals. The inadequate segregation of duties within the parastatals was identified as the major factor hindering the effectiveness of the internal controls within the state parastatals. On the other hand, the board oversight was the best established aspect established within the parastatal that promoted the effectiveness of the internal controls.

5.4 Recommendations

The following recommendations are made based on the research findings regarding the effectiveness of the internal control systems within the state parastatals in Kenya. The recommendations will be made on how the performance of the internal control system can be improved:

I Control Environment.

- The standards governing integrity should be maintained at a high level within the parastatal to ensure that the ethics and integrity within the organization is enhanced.
- The parastatals should also ensure that there is a well-developed succession plan as this was identified as a weakness in the control environment component. Well defined succession plan leads to the clarity of strategic direction of the parastatal and ensures continuity in the internal control system.
- The independence between the management and the board needs to be enhanced further and policies should be put in place to limit board interference in the management of the organization beyond their scope.
- The parastatals also need to ensure that there is a well-developed reporting structure

within the organization and this promotes accountability within the entire internal control system.

II Risk Assessment.

- The parastatals also need to consider increased use of the risk analysis when allocating funds externalities can be done by training the staff on better and advanced risk analysis techniques that they can use in the allocation of funds. This risk analysis will ensure that the parastatal does not lose money invested in sub-optimal projects.
- The parastatals also need to adopt a dynamic risk identification framework that will enable the firm to identify any potential risks on a timely manner and take corrective actions.
- The parastatals also need to improve the fraud detection mechanisms to ensure that any potential fraud risk areas are identified and mitigating measures adopted.
- The parastatals also need to adopt better environment analysis framework that will ensure that any potential threats are identified on a timely basis and any opportunity identified to help the parastatal have sustainable growth.

III Control Activities.

- Cost and benefit analysis needs to be used by the parastatals more to ensure that all the action are well analyzed to ensure the parastatal does not engage in sub-optimal activities where the parastatal is losing money.
- Information and communication systems within the internal control system also need to be improved to ensure that there is good flow of information within the system that will make the internal system more of a learning and dynamic system.
- The parastatals also need to continuously improve their data processing capabilities and tools to ensure that high quality data is available for better internal control decisions.

IV Information and Communication.

- The Cost and benefit analysis should be used more when making the decision regarding the information and communication tools that are adopted by the parastatals to ensure that

there is no wastage of resources.

- Better communication should be set up between the Board of directors, the management and the other personnel in the parastatal so as to ensure that any anomaly is addressed on a timely basis.
- Inbound and outbound information infrastructure should be improved within the parastatals.

V Monitoring Activities.

- There should be promotion of the adoption of more objectivity in the monitoring and evaluation of the internal control system.
- The parastatals should also carry out regular personnel audits to ensure that the any personnel deficiencies are detected early and dealt with both in terms of numbers and skill sets.
- There also needs to be continuous evaluation of the operation of the internal control system to ensure that the system is functioning as intended and ensure that the appropriate corrective measures are put in place to deal with any deviation from the expected performance in the internal control system.

5.5 Suggestion for Further Research.

From the insights drawn from this research there are several additional areas that could be concluded for research; first, a comparative research can be conducted by comparing the effectiveness of internal controls between private sector firms and state parastatals and compare the COSO components performance in the public with the private firms. The internal control system could also be analyzed with the assumption of the static system as defined by COSO and look at performance of a dynamic internal control system. Comparative research could also be carried out across various countries where the research could be conducted in another country states parastatals and the results compared and contrasted with the results from the Kenya research.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE:

SECTION A: PERSONAL DETAILS.

(Tick Only one option)

1. Gender.

☐ Male

☐ Female

2. Number of Years worked in the State Parastatal.

☐ 1-3 Years

☐ 3-5 Years

☐ 5-7 Years

☐ 7-10 Years

☐ Over Years

3. Management Level.

☐ Top Management.

☐ Mid-Level Management.

☐ Junior level Management.

4. Type of Engagement Contract.

☐ Performance based Contract.

☐ Permanent non-performance based contract.

5. State parastatal Classification.

☐ Commercial state corporations

☐ Commercial state corporations with a strategic function.

☐ Executive Agencies

☐ Independent Regulators

☐ Research institutions & Public education institutions

SECTION B: INTERNAL CONTROL QUESTIONS.

(Tick Only one option adjacent to the questions below)

I Control Environment.

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1. There exists a well-established standard of conduct that guides integrity and ethical values.					
2. There are sufficient strategies put in place to evaluate and ensure adherence to the established standards of conduct.					
3. The board of has established effective oversight responsibilities within the parastatal.					
4. There is a high degree of independence between the board of directors and the management.					
5. The board of directors takes sufficient steps to ensure that the parastatal has adequate expertise in all sections.					
6. There exists clearly defined organizational structure within the parastatal.					
7. There exists well defined reporting structure within the parastatal.					
8. Authority and responsibilities within the parastatal are clearly defined.					
9. The parastatal has put in place adequate measures that ensure that it attracts the right personnel and is able to retain them.					
10. There exists an adequate framework to identify and alleviate any personnel deficiencies both in terms of quality and quantity.					
11. The parastatal has a well-defined and clear succession plan.					
12. There exists an appropriate framework that disciplines and rewards the staff's performances in relation to their objectives.					

II Risk Assessment.

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1. The objectives are clearly specified in all aspects of the parastatal.					
2. The parastatal uses risk analysis appropriately as a guiding tool when allocating funds externally.					
3. There is a high degree of compliance with the relevant accounting standards.					
4. There is a high degree of compliance with the relevant standards that impact on the parastatal.					
5. The parastatal has a high degree of adherence to external laws and policies.					
6. There exists effective framework for risk identification.					
7. There are adequate measures that have been put in place to respond to the various risks.					
8. There exists appropriate fraud detection and mitigating strategies.					
9. The parastatal carries out continuous environmental analysis to identify emerging risk areas.					
10. There is continuous risk assessment of the various changes that could have an impact on the internal control system.					

III Control Activities.

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1. There is a high degree of integration of the risk assessment in the entire internal control system.					
2. There is a high degree of segregation of duties and roles within the parastatal.					
3. There exist sufficient mitigating strategies for any risk that the parastatal may experience.					

4. There are well established controls built into the technologies that have been adopted by the parastatal.					
5. The parastatal ensures that the relevant technologies key for internal controls are acquired.					
6. There exists relevant security management in all the areas of the parastatal.					
7. There exist well developed policies to ensure that management control directives are implemented.					
8. There exists effective accountability and responsibility in executing the internal control policies.					
9. There exists an appropriate framework to initiate corrective action whenever an anomaly in the internal controls is identified.					

IV Information and Communication.

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1. The parastatal continuously updates its information and communication systems with advancement in technology.					
2. The existing information and communication ensures accurate capture of both internal and external data.					
3. There is high quality processing and accurate dissemination of the data.					
4. Cost and benefit analysis plays a major role in the decision making of the information and communication tools that are to be adopted.					
5. There exists effective communication of the internal control information in the parastatal between board, management and other staff members.					
6. There is a high degree of separation of the communication lines among the various stakeholders in the firm.					

7. There exists effective inbound to the parastatal.					
8. There exists effective outbound communication to external parties.					

V Monitoring Activities.

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1. There exist effective monitoring activities that identify that internal control components are present and functioning as expected.					
2. There is continuous evaluation of the operation of the internal control system.					
3. There exist appropriate personnel both in terms of numbers and skill sets to undertake the monitoring of the internal control system.					
4. There exists a high degree of objectivity in the evaluation of the operation of the internal control system.					
5. Internal controls deficiencies are communicated in a timely manner to the relevant parties.					
6. There is an effective assessment of the corrective measures to ensure that they are having the desired effect.					