

**DETERMINANTS OF INTERNAL AUDIT AND ITS EFFECTIVENESS IN THE  
PUBLIC SECTOR IN KENYA: A CASE OF THE NATIONAL TREASURY**

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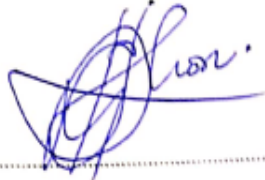
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**A PROJECT RESEARCH SUBMITTED IN PARTIAL FULFILMENT OF THE  
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### DECLARATION

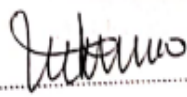
I declare that this applied research project is my original work and that it has not been presented in any other University for Academic Credit.

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### SUPERVISOR'S DECLARATION

This applied research project is submitted for examination with my approval as the University supervisor.

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**DEDICATION**

Linnet Nyachae has been of profound importance for running most of my errands whenever I was engaged in this process, for her practical and emotional support. To my children Wesley and Velma, who have been affected in every way possible by this quest.

## **ACKNOWLEDGEMENTS**

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## TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>i</b>
<b>DEDICATION.....</b>	<b>ii</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>iii</b>
<b>TABLE OF CONTENTS .....</b>	<b>iv</b>
<b>LIST OF TABLES .....</b>	<b>vii</b>
<b>LIST OF FIGURES .....</b>	<b>ix</b>
<b>ABSTRACT.....</b>	<b>x</b>
<b>OPERATIONAL DEFINITION OF TERMS.....</b>	<b>xi</b>
<b>ABBREVIATIONS AND ACRONYMS.....</b>	<b>xii</b>
<b>CHAPTER ONE .....</b>	<b>14</b>
<b>INTRODUCTION.....</b>	<b>14</b>
1.1 Introduction.....	14
1.2 Background of the Study. ....	14
1.2.1 Determinants of Internal Audit Effectiveness.....	17
1.3 Statement of the Problem.....	17
1.4 Purpose of the study.....	18
1.5 Objectives of the Study.....	19
1.6 Research Hypothesis.....	19
1.7 Significance of the Study.....	19
1.8 Scope of the Study. ....	21
1.9 Delimitations of the Study. ....	21
1.10 Limitations of the Study. ....	21
1.11 Assumptions of the Study.....	22
1.12 Theoretical Framework.....	22
1.12.1 Agency Theory.....	22
1.12.2 System Theory. ....	24
1.13 Conceptual Framework.....	26
<b>CHAPTER TWO .....</b>	<b>28</b>
<b>LITERATURE REVIEW .....</b>	<b>28</b>
2.1 Introduction.....	28

2.2 Review of Literature .....	28
2.2.1 Organization Independence and Internal Audit Effectiveness.....	28
2.2.2 Training and Internal Audit Effectiveness.....	30
2.2.3 Top Management Support and Internal Audit Effectiveness.....	31
2.2.4 Management Information System and Internal Audit Effectiveness.....	34
2.2.5 Internal Audit Effectiveness. ....	35
2.3 Summary of Review of Literature and Research Gap. ....	37
<b>CHAPTER THREE .....</b>	<b>39</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>39</b>
3.1 Introduction.....	39
3.2 Research Design. ....	39
3.3 Research Site.....	39
3.4 Target Population.....	40
3.5 Study Sample .....	40
3.5.1 Sampling Procedure. ....	40
3.5.2 Study Sample Size. ....	40
3.6 Data Collection .....	41
3.6.1 Data Collection Instruments. ....	41
3.6.2 Pilot Testing of Research Instruments.....	42
3.6.3 Instruments Reliability.....	42
3.6.4 Instrument Validity.....	42
3.6.5 Data Collection Procedures.....	43
3.7 Data Processing and Analysis.....	43
3.8 Legal and Ethical Considerations. ....	44
<b>CHAPTER FOUR.....</b>	<b>45</b>
<b>DATA ANALYSIS AND FINDINGS.....</b>	<b>45</b>
4.1 Introduction.....	45
4.2 Characteristics of the Respondents .....	45
4.2.1 Response Rate.....	45
4.2.2 Reliability Results.....	46
4.2.3 Gender of Respondents.....	47

4.2.4	Age of Respondents.....	47
4.2.5	Training on Information Technology.....	48
4.2.6	Academic and/or Professional Qualifications.....	49
4.2.7	Number of Years an Individual Has Been Using Auditing Software.....	49
4.3	Presentation of Research Analysis, Findings and Interpretation .....	50
4.3.1	Descriptive Findings .....	50
4.3.2	Regression Findings.....	64
<b>CHAPTER FIVE .....</b>		<b>73</b>
<b>DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS.....</b>		<b>73</b>
5.1	Introduction.....	73
5.2	Discussion of Findings.....	73
5.2.1	Demographic and General Information .....	73
5.2.2	Organization Independence and Internal Audit Effectiveness.....	73
5.2.3	Training and Internal Audit Effectiveness .....	75
5.2.4	Top Management Support and Internal Audit Effectiveness.....	77
5.2.5	Management Information Systems and Internal Audit Effectiveness .....	79
5.2.6	Internal Audit Effectiveness .....	80
5.3	Summary of Main Findings. ....	82
5.3.1	Organization Independence and Internal Audit Effectiveness.....	82
5.3.2	Training and Internal Audit Effectiveness.....	83
5.3.3	Top Management Support and Internal Audit Effectiveness.....	84
5.3.4	Management Information System and Internal Audit Effectiveness.....	85
5.4	Conclusion. ....	86
5.5	Recommendations.....	87
5.6	Areas of Further Studies. ....	88
<b>REFERENCES.....</b>		<b>89</b>
<b>APPENDICES.....</b>		<b>94</b>
<b>Appendix I : Introduction Letter.....</b>		<b>94</b>
<b>Appendix II : NACOSTI Research Authorization Letter.....</b>		<b>95</b>
<b>Appendix III : NACOSTI Research Permit .....</b>		<b>96</b>
<b>Appendix IV : Research Instrument .....</b>		<b>97</b>

## LIST OF TABLES

Table 3.1 Sample Size.....	41
Table 4.1 Response Rate.....	45
Table 4.2 Results on Reliability.....	46
Table 4.3 Gender of Respondents.....	47
Table 4.4 Age Distribution .....	47
Table 4.5 Training on Information Technology .....	48
Table 4.6 Academic / Professional Qualifications.....	49
Table 4.7 Duration one has interacted with any auditing software.....	49
Table 4.8 Effect of Organization Independence .....	51
Table 4.9 Statement on Organization Independence. ....	51
Table 4.10 Other Organization Independence factors. ....	52
Table 4.11 Effect of Training on Internal Audit Effectiveness .....	53
Table 4.12 Statement on Training.....	54
Table 4.13 Other Elements of Training. ....	55
Table 4.14 Effect of Top Management Support .....	56
Table 4.15 Statement on Top Management Support .....	57
Table 4.16 Suggestion of other Factors on Top Management Support. ....	58
Table 4.17 Effect of Management Information System.....	59
Table 4.18 Statements on Management Information Systems.....	60
Table 4.19 Suggestion of other Elements of Management Information System. ....	61
Table 4.20 Effect on Internal Audit Effectiveness.....	62
Table 4.21 Statement on Internal Audit Effectiveness. ....	63



Table 4.22 Model Summary for Organization Independence and Internal Audit	
Effectiveness. ....	64
Table 4.23 ANOVA Summary for Organization Independence and Internal Audit	
Effectiveness. ....	65
Table 4.24 Model Summary for Training and Internal Audit Effectiveness. ....	65
Table 4.25 ANOVA Summary for Training and Internal Audit Effectiveness. ....	66
Table 4.26 Model Summary for Top management support and Internal Audit	
Effectiveness. ....	67
Table 4.27 ANOVA Summary for Top Management Support and Internal Audit	
Effectiveness. ....	67
Table 4.28 Model Summary for Management information systems and Internal Audit	
Effectiveness. ....	68
Table 4.29 ANOVA Summary for Management Information System and Internal Audit	
Effectiveness. ....	69
Table 4.30 Multiple Regression. ....	69
Table 4.31 ANOVA. ....	70
Table 4.32 Beta Coefficients. ....	71

**LIST OF FIGURES**

Figure 1.1 Conceptual Framework. .... 26

## ABSTRACT

Governance and core business strategy view internal auditing as vital management tool. Essentially internal audit focused on internal controls and monetary assessment. The Kenyan government is grappling with inefficiencies, wastage of resources, fraud, corruption and non-achievement of value for money which calls into question the role of internal auditing in management of resources. The purpose of the study therefore, was to investigate the determinants of internal audit effectiveness in the public sector in Kenya, a case of the National Treasury. To achieve the above objective, the study assessed the effect of organization independence, training, top management support and management information systems on internal audit effectiveness in Kenya. Agency and system theories were adopted in an attempt to explain the phenomena under study using descriptive research design. A sample of 139 internal auditors were selected from a target population of Three hundred and ninety-five (395) internal auditors drawn from the National Treasury in Kenya using stratified random sampling technique. Data was collected through online questionnaires sent through emails. Descriptive and regression analysis were used to analyze the collected data with the help of SPSS. The Descriptive statistics and regression analysis showed that the four independent variables had positive significant effect on internal audit effectiveness ( $R=.75$ ,  $P=0.00$ ). Top management support had the highest effect (adjusted=.802) followed by management information system (adjusted  $R=.70$ ), Organizational independence (adjusted  $R=.69$ ) and training ( $R=.687$ ) respectively. On the basis of these findings the study concluded that the component of technology in management information systems and top management support is a game changer in ensuring the effectiveness of internal auditors, hence recommending the need for support and total co-operation from the senior managers especially with regard to ensuring adequate budgetary provisions for a water tight management information system. Organization independence and training contributed marginally to the measured variable although at a significant level. On the basis of this conclusion the study recommends that the reporting structure should be improved to facilitate the independence of the internal audit function. The training efforts should be tailored towards the use of current technology as the descriptive results showed very low level of competence in the use of audit software. The study recommends that another study should be undertaken on the effect of electronic audits on the effectiveness of internal audit.

**OPERATIONAL DEFINITION OF TERMS**

Internal Audit Effectiveness	Is the degree (including quality) to which established objectives are achieved.
Internal Auditing	Is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risks management, control and governance processes.
Management Information Systems	Refers to a computer-based system that provides managers with the tools to organize, evaluate and efficiently manage departments within an organization.
Organizational Independence	Is the freedom from conditions that threaten objectivity or the appearance of objectivity.
Top Management Support	Devote time proportion to its cost, potential, review plans and follow up on results.
Training	Is a technique for improving employees' performance and enhancing organization productivity in the workplace.

**ABBREVIATIONS AND ACRONYMS**

AIE	Authority to Incur Expenditure
ANOVA	Analysis of Variance
E-pay	Electronic Payment
E-procurement	Electronic Procurement
E-Revenue	Electronic Revenue
ERP	Enterprise Resource Planning
GHRIS	Government Human Resource Information System
IA	Internal Auditing
IAGD	Internal Auditor General Department
IFMIS	Integrated Financial Management Information System
IIA	Institute of Internal Auditors
IARF	Institute of Internal Auditors Research Foundation
ISPPIA	International Standards for the Professional Practice of Internal Auditing
IT	Information Technology
MDAs	Ministries, Department and Agencies
MIS	Management Information Systems

NACOSTI	National Commission for Science, Technology and Innovation
NCPB	National Cereals and Produce Board
NHIF	National Hospital Insurance Fund
NYS	National Youth Service
OAG	Office of Auditor General
PFM	Public Financial Management
SPSS	Statistical Package for Social Sciences

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Introduction.**

The chapter aimed at providing sufficient information for better understanding of the study. It examined the global context and then narrowed down to the issues that the study was to address. The chapter provided the background information, statement of the problem, objectives, questions, significance, scope, limitations and delimitations attributed to the study.

#### **1.2 Background of the Study.**

A systematic and methodical approach to the modern organization view internal auditing as a cog to good governance. The structure and organization of public institutions has entrenched internal auditing as an important functional tool for better management of public resources. Huong (2018) states that strict observance of internal controls and monetary assessment is the major conventional area of interest of internal auditors. Furtherance to above tenet, staffs in auditing department execute fundamental mandate in the overall administration of public institutions as a functional tool to evaluate risk and optimization of limited organizational resources. Drogalas, Pazarskis, Anagnostopoulou and Papachristou (2017) states that present day internal audit function contributes immensely to the faster realization of organization objectives by initiating well structured and disciplined perspective in appraisal of core business strategies. Internal audit function derive its legitimacy and effectiveness from independence of the team, competency and management commitment (El-sayed, 2011). Dittenhofer (2001) posit that the effectiveness of Internal Auditing (IA) has a positive effect on the policy of each department being

audited. Efficient internal audit embeds the demand and growth for internal auditing services in establishment of robust and dynamic organizations hence able to manage change (Cohen & Sayag, 2010). Alignment of goals and outcomes has been championed by most authors by entrenching internal audit in terms of effectiveness in achieving the objectives of its functions (Tahajuddin & Kertali, 2018). An internal audit has been defined as the eventual goal of an effective function, demonstrated in realization of the vision of a business entity (IIA, 2010),

Public sector departments are formulated by the Constitution and the government through various legislations and publicly financed on behalf of its citizens in Kenya. Internal auditing in Kenya was a concept of the colonial administration but was abolished as a recommendation of the Economic Commission Report of 1962. Due to the mismanagement of public resources, non-compliance to established laws, regulations and procedures it became apparent that its existence was vital and hence re-introduction in 1984. Internal re-organization of the said government departments was engineered in 1995, audit inspectorate came to being. Clustering ensured Internal Auditors were placed in provincial headquarters from where they conducted audit inspections. Another restructuring of the department was concluded in 1997, centralized and confined under the National Treasury which presents current structuring (Government of Kenya [GOK], 2014).

The Internal Auditing Department of the National Treasury plays an advisory role to the accounting officers in the Ministries, Departments and Agencies (MDA's). Most of the advice is pegged on best practices and standards that ensure authority and responsibilities are effectively discharged. Internal auditors are mandated to evaluate and give feedback on the efficacy of the internal control systems implemented by line managers in assessing



viability of strategies entrenched in the organization practices. In addition, the department ensures conformity to the relevant laws that govern operations of public institutions. Lastly, the department ensures internal and external reporting in tandem to strict conformity to code of conduct (GOK, 2014).

Internal Auditor General Department (IAGD) is defined as a management concept aimed at self-regulating and actual intervention mechanism to minimize the adverse impact of risk exposure through predictable, robust and dynamic systems in tandem with identified needs of departments which is entrenched in Public Finance Management Act, 2012 (GOK, 2012). Roles include critical evaluation of the governance systems, mechanisms for transparency and accountability in utilization of public resources, collection and accountability of revenue. Secondly, strengthening internal control mechanisms, systems audit, conducting risk-based and value-for-money audits that are impactful on attainment of the overall objectives of an entity. Additionally, verification of assets administration by the entity and ensuring that there are properly secured. Last but not the least, ensuring that relevant policies, procedures and international best practices are adhered to by the organization which informs timely decision making.

Line managers are accountable in implementing good governance, risk management and control systems in the MDA's. The role of internal auditors is primarily assisting accounting officers and AIE holders in accomplishing their goals by assessing the adequacy of systems put in place by the top management under Section 160 of the PFM Act and regulations of 2015 (GOK, 2015)

### **1.2.1 Determinants of Internal Audit Effectiveness**

Factors affecting Internal audit effectiveness are diverse, conventional and sometimes unpredictable due to the circumstances of operations. Organizational independence, internal audit charter, management support, management perception, contributions of adequate and competent audit staff, professional proficiency, organization setting, scope of internal audit work, training, management information system, audit committees form the bulk of determinants of internal audit effectiveness. Competence encompass qualified education, professionalism and audit training is key to effective internal audits (Shohihah, Djamhuri, & Purwanti, 2018). A study in Ethiopia public sector found that auditor's independence is paramount in assessing the risky areas in governments operations (Temesgen & Estifanos, 2019). According to Mwangi (2017) adequacy of resources and support in terms of prompt escalation of reports enhances internal audit effectiveness. This informed the researchers selection of the four independent variables in determining their effect on internal audit effectiveness in the public sector in Kenya.

### **1.3 Statement of the Problem.**

Successful internal audit function is as a result of ensuring consistency in performance, sustainability and prevention of misappropriation of public funds (Badara & Saidin, 2013). For an audit to be termed as adding value, it is a conscious and deliberate effort of auditor's intention, roles and responsibilities, best practices encumbered with a high level of commitment based on established standards and policies (Ussahawanitchakit & Intakhan, 2011). According to Lenz and Sarens (2012) accounting scandals that brought down global giants queried effectiveness of internal audit in aiding organizations manage its resources.

They asserted that, a robust internal auditing function could have identified and prevented such scandals from occurring.

Internal audit helps management to identify misalignment of internal controls thereby making an organization to be prone to risks of proliferation of public resources, corruption and accounting errors (Masika, 2013). Auditor-general raised questions about financial prudence of public institutions saying it is slowing down development (Kimanthi, 2019). The most recent scandals in Kenya have led to loss of funds and poor service delivery in concurrence to (Odoyo, Omwono & Okinyi, 2014). This brings into question the effectiveness of internal auditing in Kenya. Therefore, why should the citizens continue to incur expenditure on the operations of this department despite the raise in the number of financial impropriety in Kenya. Office of Auditor General (OAG) in 2018 reported that in the financial year 2016/2017 revenue of Kenya Shillings 5.1 Billion was collected but never remitted to the Exchequer. In addition, the OAG expressed 64% qualified, adverse and disclaimer opinions on financial statements of 129 National Government entities representing questionable expenditure amounting to Kenya shillings 1.5 Trillion. Studies on four determinants of internal audit effectiveness namely organization independence, training, top management support and management information systems remain scanty. Therefore, the study assessed the four determinants of internal audit effectiveness in Kenya, particularly a case of the National Treasury.

#### **1.4 Purpose of the study**

The purpose of the study was to investigate determinants of internal audit effectiveness in Kenya. A Case of the National Treasury.

### **1.5 Objectives of the Study**

- i. To examine the effect of organization independence on internal audit effectiveness in the National Treasury.
- ii. To establish the effect of training on internal audit effectiveness in the National Treasury.
- iii. To assess the effect of top management support on internal audit effectiveness in the National Treasury.
- iv. To analyze the effect of management information systems on internal audit effectiveness in the National Treasury.

### **1.6 Research Hypothesis**

*H<sub>01</sub>*: There is no significant relationship between organisation independence and internal audit effectiveness in the National Treasury.

*H<sub>02</sub>*: There is no significant relationship between training and internal audit effectiveness in the National Treasury.

*H<sub>03</sub>*: There is no significant relationship between top management support and internal audit effectiveness in the National Treasury.

*H<sub>04</sub>*: There is no significant relationship between management information systems and internal audit effectiveness in the National Treasury.

### **1.7 Significance of the Study.**

The study could be of significance to the National Treasury in gathering information relating to the key activities of internal audit and operationalization of the department. In addition, the study could help in resource mobilization and focus on the empowering the

internal audit workforce. Optimization of resources at the disposal of the National Treasury always had an impact on performance and service delivery. Therefore, it is paramount for the ministry to deploy effective staff and efficient systems to accomplish the goals of the organization. The research project could assist county and national governments in policy formulation and regulation of the internal audit departments in Kenya. This was because policies and regulations aimed at enhancing a robust internal audit have great benefits in increasing transparency, accountability, corporate governance, financial disclosures and adequate management of public resources. The study could help the legislature in both levels of governments in providing up to date information in prudent management of public resources and achieving value for money principles.

The study could aid researchers and academic institutions in providing information and a benchmark for further studies on the determinants, challenges and risks faced in pursuit of an effective internal audit department. This could assist to enrich knowledge on aspects of public sector finance management and even borrow the best practices from the private sector. The study could sensitize the citizens in better understanding of the roles of internal auditors and critically examined prudent public finance management. The public can make informed decisions through active public participation in legislation process in public finance in both county and national government. The study could empower the public to understand the role of various stakeholders in management of public resources. Audit profession could be interested in the research outcome because the information gathered could help the auditors better understand the issues surrounding their productiveness, efficiency and effectiveness. In performing its advisory role, the audit professional would

help in mitigating risks and wastage of resources in the public sector. It would enhance professionalism in the cross-functional teams in public finance management.

### **1.8 Scope of the Study.**

Content scope highlighted assessment of the effect of organizational independence, training, top management support and management information systems on internal audit effectiveness in Kenya: A Case of the National Treasury. The population targeted was 395 internal auditors in Kenya. The National Treasury was selected because it had the larger workforce of internal auditors spread around the Republic. The sample was 198 respondents being 50% of the population under study. Stratified random sampling formed the main basis of sampling ensuring fairness in selecting respondents. Agency and system theories were adopted in explaining the variables.

### **1.9 Delimitations of the Study.**

The study was delimited to internal auditors under the National Treasury and didn't cover internal auditors in the county governments who also form a component of civil service. The National Treasury was selected because it has the largest number of internal auditors in spread around public institutions in Kenya. The study was also delimited to the four independent variables namely organization independence, training, top management support and management information systems even though there were other variables that determine internal audit effectiveness.

### **1.10 Limitations of the Study.**

The research project adopted an online mode of sending questionnaires to the respondents using their official e-mail addresses. This posed a challenge in terms of responses and the timing because of the analysis. The researcher encountered limitation on non-functional

email addresses hence no response. He also encountered limitation on the delay of the respondents giving feedback within the shortest time possible. Some respondents questioned the intentions of the research.

The researcher minimized the effect of the cited limitations through the following interventions to enhance credibility of the analysis. The first limitation, the researcher designed the questionnaires whereby it took a short time to fill and send back. A follow-up was conducted through phone calls for those who delayed in giving their responses for the analysis to start. The respondents were assured the research was purely for academic use hence it was treated as such. The introduction letter from the university gave assurance of the purpose of the research being carried out.

### **1.11 Assumptions of the Study**

The researcher used online mode of questionnaires and therefore assumed that all the respondents had access to computers and internet services and didn't encounter difficulties in working with the gadgets. In addition, the researcher assumed that the respondents would answer the questions honestly and promptly.

### **1.12 Theoretical Framework**

The study was based on agency and system theory that supported the research under review.

#### **1.12.1 Agency Theory.**

Agency theory is associated with work of Adams (1994) alluded to networking of interests and contracts between the principals and agents who are charged with managing resources at their disposal. The theory assumes that agents are privy to more information than the

owners of the resources, which accords them an edge in taking care of their interests and this denies the principals the capacity of securing their own interests (Bromwich & Scapens, 2016). The assumption of the theory is that it bestows the onus of acting reasonably to both the principal and agent in resource optimization. Agency theory explains the economic conduct of the major players in sizeable organizations. The traditional set up of a business entity assumed that they were entirely controlled by one individual or that sizeable business entities operated like a one man show. The theory postulates that modern business models are owned by a number of shareholders but day to day operations are under the purview of managers and whose economic interests are diverse (Fama, 2012). Managers are seen as agents of shareholders who are the principals. Managers are assumed to regard shareholders' wants as constraints on their own wants which might include the highest possible standard of living financed by very high pay, a huge set of fringe benefits like first class air transport, subsidized accommodation, membership of exclusive clubs and the freedom to invest in prestigious projects and bonding costs (El-sayed, 2011). Agency theory states that such costs can be minimized to a large extent by incurring monitoring expenditure.

Monitoring expenses are cost of making management accountable to shareholders through accounting reports, audits, good corporate governance including audit executives and holding the senior management accountable to the shareholders in general and to the chair of the board in particular (Adams, 1994). Much more important than monitoring costs in reducing the agency problem are bonding costs. These are the costs of bonding managers to shareholders so that the managers identify the shareholder's interests as the same as their own. Agents therefore would drive their own personal interests that are contrary to the



interest of principals hence reducing their earnings. Agency theory denotes the connection between the establishment of the internal audit department and its crucial mandate to the organization hence principals view internal audit expenditure as monitoring tool to take care of their interest (Ahmad, Othman, & Jusoff, 2009).

Puersem and Pumphrey (2005) opine that internal auditors are agents and they are mandated to assess the viability of systems and controls for a number of major stakeholders who entail senior management (board, accounting officers and AIE holders) and audit committee. The only undoing of agency theory is when the principal lacks capacity to monitor activities hence gives agents (senior management) room to exercise undue influence on programs. Internal auditors ought to possess requisite academic/professional qualification and attendant experience so as to execute their mandate in the most ideal manner. This theory supports three of the independent variables namely organizational independence, training and top management support. The establishment of a competent internal audit committee comprising of qualified executives fosters the desired independence and minimizes interferences in the scope and programs of internal auditors and advocates for the continuous training of the managers so as to perform their duties with the required level of competence and at the same time provide the required top management commitment to ensuring effective internal audit (Endaya & Hanefa, 2018).

### **1.12.2 System Theory.**

According to Nollet and Bealieu (2005), for a comprehensive outlook, system theory should explain the environmental influencers that design the structure of the auditing department in an organization. The principal agenda of system theory is to focus on deliberate tactical matters and political influences that shape up an organization auditing

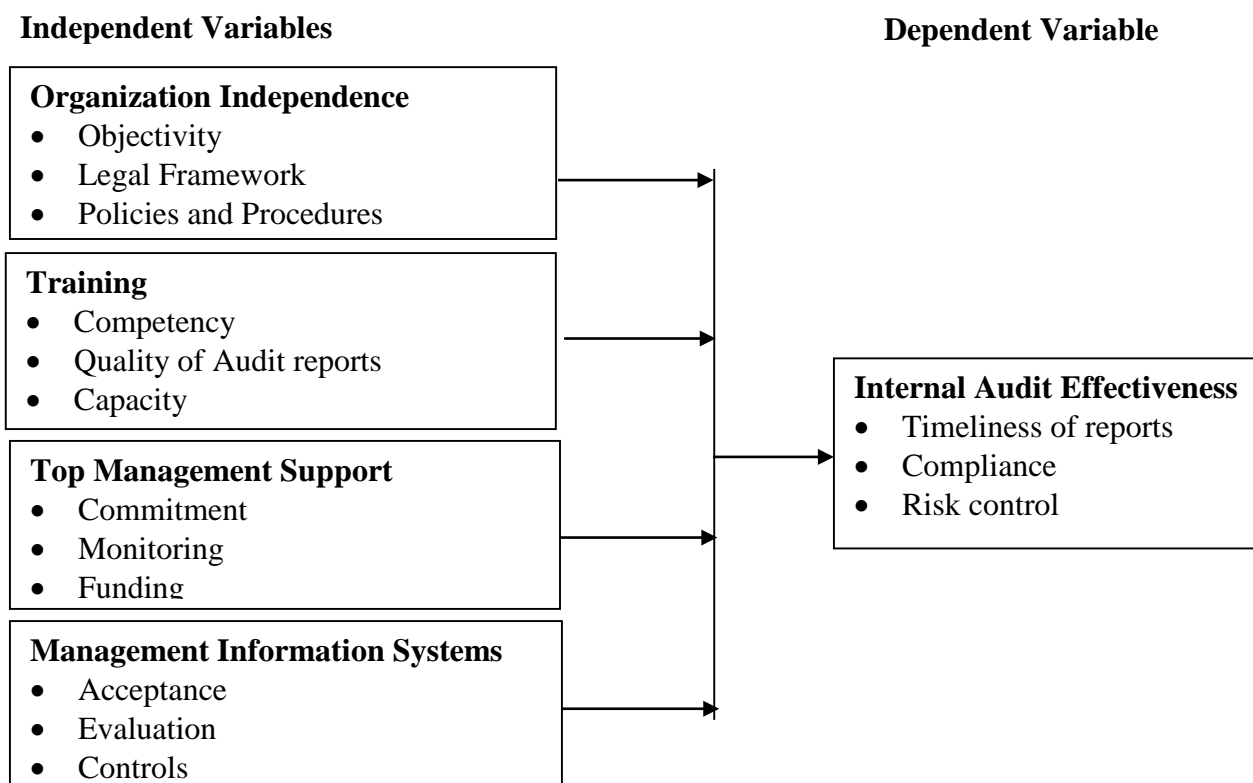
performance. According to Subramony and Douglas (2015) the systems theory help to understand the synergies that are required in the sector from all stakeholders particularly how various institutions and players in the sector ought to move together as a system in order to deliver efficiency. The theory also explains the institutional relationships that must be maintained within the sector, intra and inter-relationships. Intra-relationships can be viewed in the lenses of this theory as the relationships among the many institutions as a network in the sector while inter-relationships can be viewed as the internal institutional arrangements within each institution.

Jackson (2013) opines there exists two categories of system, the open and the closed system. Closed systems are systems that are not affected by the environment while open system was greatly influenced by the external environment. Feedback loops arising from systems that could be positive where it denoted lessons learnt or negative denoting areas which needed improvement within the whole system (Alavi & Leidner, 2001). Ghaffarzadegan, Lyneis and Richardson (2011) states that, system theory is relevant since it addresses the institutional framework where its application in auditing is further supported by the existence of various departments, sections and segregated professional disciplines, units, institutions which work together in sync to bring success. Unless, these parts work in sync, there cannot be success in the overall organizational objective in the sector. However, this theory does not give emphasis on a start and end point in the system and assumes that each element need to be guided or controlled, that if each element functions optimally the entire system will just flow. This they support the the organization independence and management information system which is expected to facilitate a smooth running of the internal audit department as an independent body but at the same time

facilitate proper functioning of the whole organization in ensuring safe use of the organizations' resources (Chikere & Nwoka, 2015).

### 1.13 Conceptual Framework.

Conceptual framework is a tool widely deployed by researchers in an effort to create an overview of the situation, generalize and specify issues under consideration (Kombo and Tromp,2006). It is the basis of configuration of indicators to be analyzed, appraised and refined as an outcome of investigation. The diagram show the relationship between the independent variables; organization independence, training, top management support and management information system and their responsive impacts on internal audit effectiveness.



**Figure 1.1 Conceptual Framework.**

Source: Author (2020).

### **Organization Independence**

Organization independence can be defined as lack of undue pressure from any quarters that is impartial and fair (IIA, 2010). The independent factor was measured in terms of objectivity, legal framework and policies and procedures.

### **Training**

Training can be defined as concept geared towards individual and teams collectively, in deliberate improvement of tactics and increase capacity in a business concern (Falola, Osibanjo, & Ojo, 2014). The factor was measured in terms of competency, quality of audit reports and capacity of the internal auditors.

### **Top management support**

The time devoted proportion to its cost, potential, review plans and follow up on results formed the basis of top management support (Lenz & Sarens, 2012). This factor was measured by commitment, monitoring and funding.

### **Management Information Systems**

Management information systems are artificial intelligence and data enabled system which accords managers ability to plan, codify and assess departments within an organization (Beal, 2019). This independent factor was measured by acceptance, evaluation and control.

### **Internal Audit Effectiveness**

Internal audit effectiveness was the basis of realization of the articulated goals (Institute of Internal Auditors[IIA], 2010). This dependent factor was measured in terms of timeliness of audit reports, compliance and risk control.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction.**

The study was scrutinized on research questions formulated. Literature was reviewed in relation to the variables presented and organized in respect to specific objectives as follows on the effect of: organization independence, training, top management support and management information systems on internal audit effectiveness in the National Treasury in an endeavor to fill the research gap identified.

#### **2.2 Review of Literature**

The empirical review expounded the connection between the four independent variables namely; organization independence, training, top management support and management information systems and the internal audit effectiveness being the dependent variable. It would further expound on the studies done in this area.

##### **2.2.1 Organization Independence and Internal Audit Effectiveness.**

Institute of Internal Auditors (IIA, 2010) defined organization independence as lack of undue pressure from any quarters that is impartial and fair. The researcher measured organization independence through three indicators namely; objectivity, legal framework and lastly policies and procedures. Objectivity is the potential of an auditor to professionally execute his roles in the most unjudgemental manner (Alzeban & Gwilliam, 2014). Legal framework is the structure and configuration of the auditing activities that establish the influence and control of the internal auditors (Masika, 2013). Policies and procedures are the ground rules and guidelines governing the auditing profession (IIA, 2010).

In a Malaysian study, Ahmad, Othman and Jusoff (2009) found out that, there was a significant influence on effectiveness of internal auditing by the independence of internal audit in relation to internal auditors objectivity. Organization independence is condensed as lack of undue pressure from any quarters that is impartial and fair (IIA,2010). The researcher measured organization independence through three indicators namely; objectivity, legal framework and lastly policies and procedures. The internal auditors cannot be exclusively detached from the management but in an ideal situation their independence is pegged on frame of mind and impartiality of the auditors (Alzeban & Gwilliam, 2014). A study in Saudi Arabia, Al-Twajry, Brierley and Gwilliam (2003) pointed out that in giving vital and value adding information to the management, internal auditor's independence is a critical component that must be in existence in order for the internal auditors to adduce fair judgement without any undue influence from any quarters. Alzeban and Gwilliam (2014) reiterated the need for auditors to avoid instances where their independence and impartiality is brought into question. The stature of internal auditors in the organizational structure should guarantee security of job continuity for internal auditor so that they are not victimised for objectively reporting on the state of the organization affairs.

In a study titled fraud and chief executives, Belay (2012) notes a correlation exists on level of independence and the financial resources allocated to the section. For a comprehensive and detailed audit job the resources at the disposal of the internal audit unit should be adequate to smoothly drive its operation and not to limit its scope. The other aspects of management in an organization emphasis on advisory and consulting services as envisaged by International Standards for Professional Practice of Internal Auditing (IIA, 2010). These

standards emphasizes on the need of a self regulating audit team. Additionally they point that the head of an internal auditing unit should have open and unlimited access to the top management. This could be ascertained through elaborate dual reporting structure.

### **2.2.2 Training and Internal Audit Effectiveness.**

Falola, Osibanjo and Ojo (2014) noted training as a concept geared towards individual and teams collectively, in deliberate improvement of tactics and increase productivity in the workplace. The researcher measured the variable through three indicators namely: competency, quality of audit reports and capacity. Competencies are the skills and practices which are a prerequisite in performing auditing activities (IIARF,2012). Quality of reports ensure pro-active self reporting of fraud and detection of errors (Saren & Leung, 2003). Capacity is the potentiality of auditors to make informed, fair and competent judgement in execution of their roles and responsibilities (Bromwich & Scapens, 2016).

The International Standards for the Professional Practice of Internal Auditors (2003) states that there is a real need in building capacity and competencies of internal auditors that is a prerequisite for effective execution of their duties and mandates. In a study in Tunisia, it was found imperative that internal auditors across the board should possess requisite education, professional qualifications, on the job training that advance the achievement of the overall goals of the organization (Dellai & Omri, 2016). Dellai and Omri (2016) reiterated internal auditors who work on day to day basis in a firm have a higher chance of unearthing misappropriation and frauds than external auditors who work on need basis. According to Ussahawanitchakit and Intakhan (2011) trained auditors try out tested and proved modes of operations through exposure acquired in a learning environment, hence

better results are achieved in the process which is in tandem with professional standards and the needs of the client in terms of flexibility, diligence and innovativeness.

It is common knowledge that training gives one an upper hand in performance which is not an exception to auditors because trained auditors will possess better analytical and judgement skills in coming up with acceptable and workable recommendations to the management (Belay, 2012). Bromwich and Scapens (2016) pointed out that, though knowledge acquisition through training is an equalizer, there is huge disparity on the amount of training one acquires in relation to problem solving skills and it depends on task at hand. Saren and Leung (2003) in their study stated that specific task training improves auditor's judgement because the main domain of auditing profession is on the judgements and capacity of trained auditors. The training should make the auditors judgement aligned with the standards and married with the laws.

Auditors training is the acquisition of skills over a long period of time through continuous exposure to different working environments and continuous professional development which is anchored on the best practices in auditing that enhances the auditors capacity to synthesize information and come up with accurate judgements (Badara & Saidin, 2013).

### **2.2.3 Top Management Support and Internal Audit Effectiveness.**

Top management support is the proportion of time devoted by management in terms of cost, potential, review of plans and follow on results (Lenz & Sarens, 2012). The researcher measured the variable in relation to commitment, monitoring and funding. Commitment by top management is the full and undivided devotion by strengthening systems and users (Mihret, Kieran, & Mula, 2010). Monitoring is the ability of top management to continuously assess and review programs and outputs (Alavi & Leidner, 2001). Lastly,



funding is the accessibility of human and financial resources in the organization (Dittenhofer, 2001). Support of senior management is crucial to the recognition and embracing of the internal audit services in any business set up (Dellai et al., 2016). ISPPIA points that internal auditors should enjoy support from top echelon of the administration and the owners of business entities for seamless execution of roles and mandates as per the rules of engagements. Internal audit section should be provided with adequate budgetary allocation that ensures smooth running of their operations and programs more effectively (Al-Twajry et al., 2003). Top management commitment to internal audit is a catalyst to effectiveness of internal audit (Mihret, Kieran, & Mula, 2010). The commitment could be devoting sufficient personnel, financial provisions and relevant equipment such vehicles, laptops, desktops, internet e.t.c. So as to ensure that internal auditors are accorded the relevant assistance and cooperation, the senior management set the rhythm in the organization that guarantees collaboration of those audited to internal audit. Degree of coordination has a bearing on successful accomplishment of internal audit objectives (Al-Twajry et al., 2003).

Mihret et al., (2010) states that, management's prerogative is to determine the policy framework that gives impetus to internal auditing to consolidate respect and bestow power, hence secure acceptance and co-operation of those being audited. According to Soh and Martinov-Bennie (2011) in evaluating the contributions of internal audit functions in the quality of financial reporting, chief audit executives's assessments are evident that an effective internal audit service is significantly related to the resources at its disposal. Coram, Ferguson and Moroney (2008) alludes that self-reporting of fraud and detection of errors by auditors could be enhanced by engaging internal auditors on a full time basis.

Alzeban and Gwilliam (2014) notes, support by the management is a benchmark on internal audit effectiveness and would be enriched by engaging a team of expertly trained internal auditors who are provided with adequate funds. Ahmad et al., (2009) posit that support of senior management perpetually impacts on the success of any internal audit unit by putting in place provisions for adequate financial resources and manpower.

Audit departments and auditors audit process is largely dependant on commitment and total co-operation of senior management and therefore considered as a critical success factor hences processes within the organization should be under the tight ambit of the top management (Cohen & Sayag, 2010). According to Igbaria, Guimaraes and Davies (2014) top management support is a pillar in strengthening the eco-system of the organization through an identified sustainable programmes in development of audit team and its operations. In their study they found there exists a correlation between internal auditing effectiveness vis a vis top management commitment and co-operation. Fraudent audit reports draws the attention of senior management in coming up with viable mitigation measures and strengthen systems and operations (Mihret et al., 2010).

Mihret and Yismaw (2007) posits that adequate background checks before commencement of any audit engagement entails evaluation of required resources and expertise. Lombardi and Vasarhelty (2014) noted that, it enables allignment of skills and tasks to the competency and experiance of the audit staff available. In addition, certain performance standards articulate the specific roles and means that senior management can automatically trigger provision of necessary co-operation to the internal audit unit.

#### **2.2.4 Management Information System and Internal Audit Effectiveness.**

Management information systems is an artificial intelligence and data dependent system which accords managers ability to plan, codify and assess departments within an organization (Beal et al., 2019). The researcher measured the variable in relation to acceptance, evaluation and finally controls. Acceptance is capacity of auditors to embrace technological advances and awareness of management information systems adopted by the users (Ahmad, Othman, & Jusoff, 2009). Evaluation is the aptitude of auditors in assessment of efficiency of systems in financial management (Lin & Wang, 2011). Finally controls refers to mechanism of ensuring integrity of financial and accounting information (Bromwich & Scapens, 2016).

Al-Mamary and Aziati (2013) points out that management information system (MIS) is a system of data conversion into information, disseminate it in the most useful manner to all stratas of management within an organization. MIS forms the basis of business planning and well organized management of operations through a structured platform of gathering, filtering, storing, recovering and disseminating information. MIS enables management and other stakeholders to access dependable information for planning and decision-making (Maribe, 2010). Moon (2012) asserts that MIS is a potent management tool for enhancing value adding services for businesses and clients from internal auditors. In line with this Lombardi et al., (2014) opined that for auditors to add value, auditing must espouse rapid technological changes and real-time capabilities to users of financial information.

Management information system in auditing operations control auditing security and reliability (Ahmad et al., 2009). Volume of data and information availed to the internal auditors aids in scrutinizing the internal controls initiated by senior management. For an

organization to effectively evaluate the strength or weaknesses of internal control systems, internal auditors should possess expertise in information technology systems (Lin & Wang, 2011). Modern business environment have stretched the customary nature of auditing hence embracing technology in all aspects of internal auditing is mandatory especially with the trends in Kenya where the government has embraced the use of MIS tools like IFMIS, E-pay, GHRIS, E-procurement, E-revenue among others in its financial management. Pathak and Azzone (2015) stated that MIS has a positive influence on internal control systems in any business environment. The study found that organizations should empower internal auditors to acquire the requisite information technology advanced working modules in order to integrate both hard skills and soft skills which are in tandem with the paradigm shifts in auditing.

### **2.2.5 Internal Audit Effectiveness.**

Internal audit effectiveness is the standard whereby articulated goals are attained (IIA, 2010). Internal audit effectiveness was measured in relation to timeliness of reports, compliance and risk control. Timeliness of reports refers to the duration of time taken in execution of audit work and issuing of the reports to the management (KPMG, 2009). Compliance is the process of conforming to the laid down policies and procedures and aligning it with the decision made (Maribe, 2010). Finally, risk control is the mechanism of mitigating and manage the inherent and emerging threats in the organization objectives (Badara & Saidin, 2013).

For internal auditing to prove legitimacy in any organization it must aid in value addition and effectiveness to vital stakeholders (Lenz & Hahn, 2015). Ridley (2008) argues that in the new dispensation, internal auditing concentrates around triple E's of efficiency,

economy and effectiveness. Where efficiency means the aspect of using minimum resources for maximization of outputs, economy is the obtaining resources in the most affordable manner while effectiveness is achieving the desired objectives. The study emphasized the supremacy of effectiveness against efficiency and economy despite the two being important to the services provided by any entity. Internal audit has a major bearing on the appropriateness of operations and procedures of a section, department or an entity being audited (Dittenhofer, 2001). According to Lee and Park (2016) argued that when audit effectiveness is held constant, audit efficiency is denoted by the aggregate effort for more successful output including realization timeliness and quality of audit reports.

Internal audit functions have changed from conventional monitoring of financial transactions to include management of risk, internal controls and core business principles (Spira & Page, 2003). The wide knowledge of accounting, finance and auditing of internal auditors influences effectiveness of internal controls systems (Lee et al., 2016). Lenz and Hahn (2015) opined that effectiveness and added value of internal auditors are inseparable hence emphasizing the indispensability of internal auditors. (KPMG, 2009) infer that a large majority of senior management are not aware of internal audit activities and they don't appreciate the critical role of internal auditors in an organization. Lenz et al., (2015) view internal audit effectiveness as a concept of analyzing risk hence aiding an organization realize its goals by influencing positively the core business principles and strategic planning. Internal audit is a service provider to the organization and the research shows it varies from organization to organization depending on internal audit function structure.

Davies (2009) opined that a difference exists between a board and management that desires internal audit function to remain impartial and support the realization of objectives

or board or management that unduly influences or gags the internal audit service from productively discharging its mandate and potentially uncover matters that they are not comfortable with or could damage reputation of the organization. The assumption that delivering vital information to the top management is a measurement of effectiveness of internal audit (Mihret, Kieran, & Mula, 2010). They assessed the internal audit effectiveness as the level the auditing service is assisting organizations to meet objectives. Compliance to laws, rules, regulations and policies in a financial environment and aiding management in the overall achievement of objectives and management of risk is a fundamental way that internal auditing can be of benefit to an organization. (Davidson, Goodwin, & Kent, 2005).

### **2.3 Summary of Review of Literature and Research Gap.**

It is noteworthy to observe that; researchers had focused their attention on the effectiveness of external auditor's more than internal auditor's effectiveness as a means of measuring their performance. This section clearly highlights, through the views and contributions of various authors, that internal audit effectiveness is the hallmark of organization success which improves the efficiencies of the processes and its control mechanism. Objectivity underpins independence not necessarily being detached but being in control of the process and the outputs which also mitigates in risk management. The advent of information technology highlighted the need for faster, efficient systems and a feedback framework that could assist in escalation and faster dissemination of information by various consumers of internal audit reports. Essentially, delayed response could adversely impact on productivity of internal audit service. Continuous development of professional auditors

through training has been emphasized by various researchers insisting on skills and competencies that could add value to the individual and the organization at large.

Internal auditing service performs a managerial and operational role in any organization hence the project will assess the determinants of internal audit effectiveness. Lenz et al., (2015) reiterates importance of comprehending the difference between effectiveness and value addition in auditing. Ernest and Young (2007) report had explicitly pointed out on the measurement metrics of effectiveness on internal auditing being the completion of internal report and the duration reports are issued. Due to inadequate skills of internal auditors in information technology and attendant computer applications, it is essential to train them for sustainability and continuous improvement of the service. Critical examination of the literature from previous studies, research on effectiveness of internal auditing in government has been scarce and has not addressed the variables under study. These are some of the key areas that this study seeks to bridge among other variability factors, which past studies has not addressed the internal auditing effectiveness in Kenya.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction.**

The chapter discussed research design adopted in carrying out the study. The following were also considered; research site, target population, study sample, data collection procedures and analysis. It further pre-tested the instruments of data collection and data processing and analysis. Finally, the legal and ethical considerations in the study.

#### **3.2 Research Design.**

A research design sets the boundaries within which the study has to be undertaken. Outlining the criteria and specific steps for gathering and analysis of data. The main aim was to ascertain the pertinent matters or issues and expounding on the practical solutions on the problem under study. Descriptive research design was adopted in this research. It was a formal way of providing more answers on questions posed. It would reflect on the reality of the situation and strived to describe possible behavior, frame of mind and distinctiveness (Mugenda & Mugenda, 2003).

#### **3.3 Research Site.**

The Constitution of Kenya 2010 stipulates the mandate of The National Treasury. Further, more additional roles are derived from the Public Finance Management Act 2012 and the Executive Order No. 1/2018. As a vital component in governance principles in public entities, internal audit plays an advisory and consultancy role in mitigation of risks, enhancing efficiency and effectiveness. The government is grappling with inefficiencies and wastage of public resources and therefore, the need for this research to expound on the variables and remedies as far as internal audit effectiveness is concerned.



### **3.4 Target Population.**

Target population is a representative group from which the research findings are generalizable (Mugenda & Mugenda, 2003). The study targeted a population of 395 GOK (2018) internal auditors in Kenya. The National Treasury was selected because it drew its mandate from the Constitution to operationalize the internal auditing across entire government set up.

### **3.5 Study Sample**

#### **3.5.1 Sampling Procedure.**

The process of sampling entails dividing a large group into sub-group that have common characteristics. The study adopted stratified random sampling that demonstrated fairness and equality in selection. This technique involves first dividing a group into sub-group and then applying random sampling method to each sub-population to form a test group (Kombo & Tromp, 2006). The internal auditors under the ambit of the National Treasury are decentralised into Sub Counties, Counties, Regional and Sector Heads. Therefore, stratified random sampling could accurately reflect the population studied by ensuring that each sub-group within the population received proper representation within the sample.

#### **3.5.2 Study Sample Size.**

A small part of the entire population from which evidence is obtained is a sample (Kothari & Garg, 2014). When determining an effective method of a sample in a factual research there is need to come up with a representative statistical sample.

Yamane's formula was adopted in deriving the sample size. The Yamane formula is used to calculate sample sizes. It states that:

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

Where n = sample size

N = population

e = margin of error of 0.05

From the estimated figure of 395, the sample size was:

$$n = 395 / 1 + 395(0.05)^2 = \text{approximately } 198.$$

**Table 3.1 Sample Size.**

Category	Population	Sample
Sector Heads	20	198/395*20 =10
Ministry/ Agency Based Auditors	60	198/395*60 =30
Regional Auditors	8	198/395*8 =4
County Auditors	47	198/395*47 =24
Sub-Counties Auditors	260	198/395*260=130
<b>TOTAL</b>	<b>395</b>	<b>198</b>

**Source:** Reprinted from “*Internal Audit Guidelines for National Government Entities*” GOK, (2018),p.68, Nairobi : Government Printer.

### 3.6 Data Collection

#### 3.6.1 Data Collection Instruments.

The research project adopted questionnaires which were based on the research objectives.

The questionnaires were construed to be time saving and easy to administrate (Mugenda &

Mugenda, 2003). The questionnaires had closed ended questions which adopted a Likert scale ( which ranged from 1 = Strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree and 5= Strongly Disagree). A few unrestricted questions were used to evoke qualitative data on personalized reasoning related to internal audit effectiveness.

### **3.6.2 Pilot Testing of Research Instruments.**

Piloting of the questionnaire was conducted before carrying out the study. It involved 10% the size of the sample (Kothari & Garg, 2014). This was equal to 20 questionnaires randomly drawn from the National Treasury. The participants in the pre-testing were not included in the final study. Ideally, pre-testing of the research instrument was to ensure they were both valid and reliable for data collection. The pilot test data collected was used to compute Cronbach's alpha coefficient which has been widely employed to measure reliability of the research instrument (Kothari,2004).

### **3.6.3 Instruments Reliability**

Mugenda and Mugenda (2003) posits reliability as a measure of the replicability of consistent results if subjected to different data repeatedly. Cronchbach's alpha coefficient was carried out to assess the realibility of the research instrument. Cortina and Cortina (2009) advocates for a reliability that are greater than 0.6. According to Esposito, et al.,(2011) stated that values greater than 0.7 are regarded as reliable. The overall Cronbach alpha coefficient was 0.7236 shown in Table. 4.1 hence reliable.

### **3.6.4 Instrument Validity.**

Validity means extent the results derived from the data scrutinized and reflects actual phenomena under study (Kothari,2004). Validity is meant to ascertain whether the results are accurate, correct, complete, believable and meaningful. In this research content

validity was ascertained by subject matter experts and the supervisor who ensured the measuring techniques in the tools as well as coverage of the subjects areas was as stipulated in the questionnaire.

### **3.6.5 Data Collection Procedures**

Questionnaires had the pivotal role of data collection in the study. The use of questionnaire method in this research assisted the researcher to get more responses and enabled the researcher to ask sensitive questions because questionnaires were confidentially handled (Kothari & Garg, 2014). Formulated questionnaires which were sent to participants through their email addresses. The questionnaires which comprised of open ended and closed questions were used to collect primary data thereby permitting the respondents free latitude in responding.

### **3.7 Data Processing and Analysis.**

Data processing and analysis entailed detailed number of stages. Data collected was scrutinized for appropriateness and then items were then coded and entered in SPSS. Descriptive statistics such as frequency, mean, standard deviation and percentage were showcased in tables and charts. Internal audit effectiveness was regressed against four independent variables namely organization independence, training, top management support and management information systems.

The regression model was expressed in the equation below was to assess the relationship and test the hypothesis.

#### **Equation: Regression Model.**

$$Y = \beta_0 + \beta_1 \times X_1 + \beta_2 \times X_2 + \beta_3 \times X_3 + \beta_4 \times X_4 + \epsilon$$

Where:

Y = Internal Audit Effectiveness

$\beta_0$  = Constant (Coefficient of intercept)

$x_1$  = Organization Independence

$x_2$  = Training

$x_3$  = Top Management Support

$x_4$  = Management Information System

$\varepsilon$  = error

$\beta_1, \dots, \beta_4$  = Regression coefficient of the four variables.

### **3.8 Legal and Ethical Considerations.**

Ethical issues are a pre-requisite when conducting research and must be considered in the design and development phase (Kothari,2004). Every measure was taken to comply with confidentiality, honesty and emotional care. The most pertinent legal and ethical issues addressed included the principle of confidentiality, informed consent and acceptance. While conducting the research, the objective of the study was explained to the respondents and their free will in participating was assured. NACOSTI research authorization letter, permit and introduction letter from the University would give assurance and credibility of the research project.

## CHAPTER FOUR

### DATA ANALYSIS AND FINDINGS

#### 4.1 Introduction.

Data analysis and findings of the project was illustrated in this chapter. The purpose was to investigate determinants of internal audit effectiveness in Kenya, Case of the National Treasury. The section was organized thematically according to objective of the study as follows; response rate, reliability results, background information, descriptive findings and regression findings. SPSS was used to analyze data. Relative frequencies were used in most of the questions in addition to mean, standard deviation and finally regression analysis showed whether and how variables were related.

#### 4.2 Characteristics of the Respondents

##### 4.2.1 Response Rate.

The sample size was 198 respondents, 139 responded to the online questionnaires, constituting 70% response rate.

**Table 4.1 Response Rate**

<b>Category</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Response	139	70
Non-response	49	30
<b>Total</b>	<b>198</b>	<b>100</b>

Source: Author (2020).

Figure 4.1 indicated response rate which was 70%. Mugenda and Mugenda (2003) states that 50% or more response rate is deemed sufficient for analysis and presentation. The response rate of 70% as was derived in this study was viewed as appropriate for analyzing of data.

#### 4.2.2 Reliability Results.

Reliability assessment was examined using Cronbach's alpha coefficient for each variable. Table 4.1 showed that each variable was considered reliable because their Cronbach's alpha coefficient had higher values of more than 0.7 therefore in general terms deemed adequate (Hair, et al., 2010).

**Table 4.2 Results on Reliability.**

<b>Variables</b>	<b>Units</b>	<b>Cronbach's alpha coefficient</b>	<b>Results</b>
Organization Independence	6	0.741	Good
Top management support	6	0.737	Good
Training	6	0.726	Good
Management Information System	6	0.713	Good
Internal audit effectiveness	6	0.701	Good

Source: Author (2020).

Cronbach's alpha coefficient results ranged between .701 to .741. Organizational independence established the highest value for reliability with 6 items where Cronbach's alpha coefficient values was .741, top management support factors followed with an established Cronbach's alpha coefficient of .737, training came in third position with an established Cronbach's alpha coefficient of .726, management information system followed with an established Cronbach's alpha coefficient of .713. Lastly, items that measured internal audit effectiveness established Cronbach's alpha coefficient of .701. Therefore, reliability results were considered ideal for the study.

### 4.2.3 Gender of Respondents.

The gender profile of the respondents is shown in table 4.3

**Table 4.3 Gender of Respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Male	119	86
Female	20	14
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020).

Gender of respondents showed that most of the study participants were male (119, 86%) as opposed to females at (20, 14%). Based on male and female dispersion, it was concluded that there was a considerable difference between male to female participants. The study showed auditing profession is male dominated therefore, un-proportional distribution of different gender in the study scope. The profession has not met the of Kenyan constitution 2010 requirements on gender rule of 2/3 either gender being represented.

### 4.2.4 Age of Respondents.

The study assessed age distribution of the respondents as shown in Table. 4.4.

**Table 4.4 Age Distribution**

<b>Age Distribution</b>	<b>Frequency</b>	<b>Percentage (%)</b>
18-30 years	22	16
31-40 years	32	23
41-50 years	36	26
51-60 years	49	35
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020).

The results indicated that the respondents' age ranged between 18 and 60 years. 18 years representing the entry level while 60 years representing the expected retirement age.



Majority (49,35% of the participants were between the ages of 51- 60 years, while minority ranged from 18-30 years (22,16%) and 31- 40 years (32,23%) and 41-50 years (36,26%). Majority of the participants (61%) were between 41 and 60 years. The trend showed the workforce of the public sector is old and experienced in terms of procedure and norms of the government. But it also a risky factor in terms of innovation and modernization of the public sector.

#### **4.2.5 Training on Information Technology.**

The research sought to find out whether participants had received any training on information technology. The findings are shown in Table.4.5.

**Table 4.5 Training on Information Technology**

<b>Whether participants received any training</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Basic Computer applications	99	73
IFMIS	23	15
None	17	12
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020).

The study found that (99, 73%) of the respondents had received basic computer training while (23, 15%) of the respondents had been trained on IFMIS and (17, 12%) of the respondents had not received any training. The study has shown that a very low component of the internal auditors has been trained in related software hence the need to train them on auditing software. IFMIS is more of a larger ERP system which might largely impact on the general productivity of internal auditors.

#### 4.2.6 Academic and/or Professional Qualifications.

The study enquired about specific professional qualifications which respondents possessed.

The findings are shown in Table 4.6.

**Table 4.6 Academic / Professional Qualifications**

<b>Academic and Professional Qualifications</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Diploma	1	1
Undergraduate	6	4
Post Graduate	2	2
CPA	55	40
Diploma and CPA	16	11
Undergraduate and CPA	46	33
Post Graduate and CPA	13	9
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020).

In the study, most had professional qualifications which is represented by (130, 94%) while partly (9,6%) of the respondents had accounting background. The professional qualifications are a pre-requisite in the auditing profession. Therefore, most of the internal auditors had accounting background to perform their roles.

#### 4.2.7 Number of Years an Individual Has Been Using Auditing Software.

The study sought to establish the duration one has interacted with any auditing software.

The findings are shown in table 4.7

**Table 4.7 Duration one has interacted with any auditing software**

<b>Duration</b>	<b>Frequency</b>	<b>Percentage (%)</b>
0-1 years	33	24
1-2 years	22	16
2 years and above	5	3
None	79	57
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020).

The results show that the duration an individual has used any audit software, most of the internal auditors (79,57%) had not interacted with any audit software. Those who had used audit software are represented by 43% whereby 0-1years (33, 24%), 1-2 years (22,16%) and lastly above 2 years (5, 3%). The study showed internal audit effectiveness would be minimally enhanced by depending on human capabilities. Therefore, the benefits accrued with the use of technology would not be fully realized.

### **4.3 Presentation of Research Analysis, Findings and Interpretation**

#### **4.3.1 Descriptive Findings**

This section illustrates research analysis, findings and interpretation of the study. The purpose was to investigate determinants of internal audit effectiveness in Kenya, Case of the National Treasury. The section was organized according to objective of the study as follows; organization independence, training, top management, management information system as determinants of internal audit effectiveness.

##### **4.3.1.1 Organization Independence and Internal Audit Effectiveness.**

The first objective was to examine the effect of organization independence as a determinant of internal audit effectiveness in the National Treasury. The findings were sectioned based on the research questions. There were qualitative comments of the respondents.

#### 4.3.1.2 Whether Organization Independence Affects Internal Audit Effectiveness in the National Treasury.

**Table 4.8 Effect of Organization Independence**

Whether organization independence affects internal audit effectiveness	Frequency	Percentage (%)
Yes	128	92
No	11	8
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020).

Most of participants believed that organization independence had an effect on internal audit effectiveness in the National Treasury as accounted by 92% of the respondents.

#### 4.3.1.3 Rating of Statements of Study to Find out Whether Organization Independence is a Determinant of Internal Audit Effectiveness in the National Treasury.

Opinions were sought on Likert scale on how they could rate the statements provided on organization independence. Respondents were to use 1- Strongly Agree, 2-Agree, 3- Neutral, 4-Disagree, 5-Strongly Disagree.

**Table 4.9 Statement on Organization Independence.**

Statement	Mean	SD
There is enough evidence provided by management that ensures objectivity of the reports.	2.178	1.138
There is no undue influence by management on the audit reports provided.	1.786	.612
Internal audit is anchored in the Act and regulations that is public financial management.	1.496	.648
Rules and regulation allows freedom of operations by internal auditors.	1.794	.655
Established procedures on how internal auditing is conducted in the public sector.	1.669	.631
Policies are well understood and easy to work with.	1.823	.643
<b><u>Composite mean and standard deviation</u></b>	<b><u>1.791</u></b>	<b><u>0.72</u></b>

Source: Author (2020).

On the respondents rating on validity of each statement as regards organization independence as a determinant of internal audit effectiveness in the National Treasury, it was found out that the following statements were regarded as valid; respondents agree that there is enough evidence provided by management that ensures objectivity of the reports as shown by a mean of 2.178, which implies that the reports produced are anchored on objectivity. Similarly, most respondents agree that there is no undue influence by management on the audit reports provided as shown by a mean of 1.786. Internal audit is anchored in the Act and regulations as shown with a mean of 1.496. Respondents also agree that the rules and regulations allow freedom of operations by internal auditors as was shown with a mean of 1.794. The participants agreed that there are established procedures on how internal auditing is conducted in the public sector as shown with a mean of 1.669. Lastly, the participants agreed that policies are well understood and easy to work with as shown by a mean of 1.823.

#### **4.3.1.4 Suggestion of other Organization Independence Factors that can be embraced by the Organization to Enhance Internal Audit Effectiveness.**

The qualitative comments of participants were summarized in table 4.3 showing the main theme together with its frequency.

**Table 4.10 Other Organization Independence factors.**

<b>Statement</b>	<b>Frequency (f)</b>	<b>Percentage (%)</b>
Directing reporting	79	57
Clear policy on whistle blowing	38	27
Auditee relationship	7	5
Rewards for auditors	15	11
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020).

Majority of the respondents (79, 57%) echoed the fact that direct reporting enhances the independence. The fact that the policy on whistle blowing was there, most of the respondents (38, 27%) thought that it should be strengthened to ground independence in the internal auditing. The Auditor-auditee relationship shown by (7, 5%) which is very paramount to the success of the audit process helps both the internal auditor and auditee achieve a great deal of the process and hence the objectivity of the reports. Lastly, (15, 11%) respondents echoed that rewards for auditors is paramount in ensuring the laws of the land are implemented and prudent financial systems are entrenched in the organizational structures.

#### **4.3.1.5 Training and Internal Audit Effectiveness.**

The second objective was to establish the effect that training had on internal audit effectiveness in the National Treasury. There were also qualitative comments of the respondents.

#### **4.3.1.6 Whether Training Affect Internal Audit Effectiveness in the National Treasury.**

**Table 4.11 Effect of Training on Internal Audit Effectiveness**

<b>Whether training affect Internal Audit Effectiveness</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	112	81
No	27	19
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020).

Majority of the participants believed that training had an effect on internal audit effectiveness in the National Treasury as accounted by 81% of the respondents.

#### 4.3.1.7 Rating Statements of the Study to Find out Whether Training was a Determinant of Internal Audit Effectiveness in the National Treasury.

Opinions were sought on Likert scale on how they could rate the statements provided on training. Respondents were to use 1- Strongly Agree , 2-Agree, 3-Neutral, 4-Disagree, 5- Strongly Disagree.

**Table 4.12 Statement on Training.**

<b>Statement</b>	<b>Mean</b>	<b>SD</b>
The internal auditors possesses competencies and skills necessary to perform their responsibilities	1.860	.683
The internal auditor employs best practices to meet client needs and expectations.	1.992	.738
The internal auditors detects errors and self-report fraud .	2.051	.706
Continuous training adds value to the quality of auditing reports.	1.536	.803
Internal auditors are capable of making fair judgements.	2.123	.683
Internal auditors are empowered through structured career development.	4.860	.738
<b><u>Composite mean and standard deviation</u></b>	<b><u>2.403</u></b>	<b><u>0.73</u></b>

Source: Author (2020).

On the respondents rating on validity of each statement as regards to training as a determinant of internal audit effectiveness, these statements were regarded as valid; respondents agreed that internal auditors possess competencies and skills necessary to perform their responsibilities as shown by mean of 1.860. Majority of the participants agreed that the internal auditors employs best practices to meet client needs and expectations as shown by a mean of 1.992. Most of the participants agreed that internal auditors detect error and self-report fraud as shown with mean of 2.051. Most of the

participants agree that continuous training adds value to the quality of auditing reports as shown by mean of 1.536. Similarly, most of the participants agreed that internal auditors are capable of making fair judgments shown by a mean of 2.123. However, majority disagree that internal auditors are empowered through structured career development as shown with mean of 4.860.

#### **4.3.1.8 Suggestion of other Elements of Training to be embraced to Improve Internal Audit Effectiveness.**

The qualitative comments of respondents were summarized in table 4.5 showing the main theme together with its frequency and respective percentages.

**Table 4.13 Other Elements of Training.**

<b>Statement</b>	<b>Frequency (f)</b>	<b>Percentage (%)</b>
Continuous professional development	44	32
Structural policies	43	31
Changes in legislation	22	16
Continuous training of internal auditors	23	17
Development of instruction design	7	5
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020).

Continuous professional development had the highest number respondents (44, 32%), implying that it should be part and parcel of their career. Structural policies took the second highest number of respondents (43, 31%) implying the embedding of circulars, policies, manuals and guidelines dealing with pertinent financial issues especially where uniformity is required. The ever-changing landscape of legislation represented by (22, 16%) is a key element in financial management. Therefore, there is needed to communicate and empower the working force so that they remain relevant and able to address the changing phenomena



in public financial management. There was emphasis on continuous training from respondents represented by (23, 7%) that would enhance their effectiveness. The respondents (7, 5%) reiterated the development of instructional materials that would act as a benchmark for auditing processes and giving the final audit reports.

#### **4.3.1.9 Top Management Support and Internal Audit Effectiveness.**

The third objective was to assess the effect of top management support on internal audit effectiveness in the National Treasury. There were also qualitative comments of the respondents.

#### **4.3.1.10 Whether Top Management Support affects internal audit effectiveness in the National Treasury.**

**Table 4.14 Effect of Top Management Support**

<b>Whether top management support affects internal audit effectiveness</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	119	89
No	20	11
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020).

The results illustrated that most of the participants believed that top management support had an effect on internal audit effectiveness in the National Treasury as accounted by 89% of the respondents.

#### **4.3.1.11 Rating of Statements on Top Management Support.**

Opinions were sought on Likert scale on how they could rate the statements provided on top management support. Respondents were to use 1- Strongly Agree, 2-Agree, 3-Neutral, 4-Disagree , 5-Strongly Disagree.

**Table 4.15 Statement on Top Management Support**

<b>Statement</b>	<b>Mean</b>	<b>SD</b>
Top management is committed to strengthening systems and users.	3.864	.909
All programs and processes are directed by the top management.	1.786	.835
There is continuous monitoring and evaluation of the work of internal auditors	1.906	.968
Top management monitors performance standards of the staff and take appropriate measures.	3.829	1.041
Top management provides sufficient funding and support to facilitate internal audit function.	4.012	.869
Top management solicits for resources to support the internal audit function	4.656	.909
<b><u>Composite mean and standard deviation</u></b>	<b><u>3.34</u></b>	<b><u>0.92</u></b>

Source: Author (2020)

On the respondents rating on validity of each statement as regards to top management support as a determinant of internal audit effectiveness, the study found that statements were regarded as valid; respondents agreed that all programs and processes are directed by the top management as shown with a mean of 1.786. Similarly, majority of the participants agreed there was continuous monitoring and evaluation of the work of internal auditors with a mean of 1.906. However, majority of the respondents were neutral moving towards disagreement of the commitment to strengthen systems and end users by top management shown with a mean of 3.864. Most respondents disagreed that top management monitors performance standards of the staff and take appropriate measures shown with a mean of 3.829. Most of the participants disagreed that top management provides sufficient funding and support to facilitate internal audit function shown with a mean of 4.012. Lastly, majority of the participants disagreed that top management solicits for resources to support the internal audit function shown with a mean of 4.656.

#### 4.3.1.12 Suggestion of other Elements of Top Management Support to be embraced to Improve Internal Audit Effectiveness.

The qualitative comments of respondents were summarized in table 4.7 showing the main theme together with its frequency and respective percentages.

**Table 4.16 Suggestion of other Factors on Top Management Support.**

Statement	Frequency (f)	Percentage (%)
Scope and parameter	26	19
Funding	47	34
Adequate staff	40	29
Structured career progression	19	14
Full commitment	7	5
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020)

Respondents (26, 19%) mentioned that clear scope and parameter that determines how internal auditing service operates was paramount to internal audit effectiveness. Scope defines depth and width of activities to be performed. Timely funding of all the programs which was represented by (47, 34%) within the internal audit and departments concerned enhances quality results. Most of the respondents (40, 29%) suggested adequate staff would reduce the workload and enhance productivity. Most of the respondents (19, 14%) mentioned that the scheme of service should be in tandem with the changing landscape of multiple skills of the internal auditors. Top management commitment represented by (7, 5%) should be felt in all aspects in the auditing service for optimal output of the function.

#### 4.3.1.13 Management Information System and Internal Audit Effectiveness.

The fourth objective was to analyse the effect of management information systems on internal audit effectiveness in the National Treasury. There were also qualitative comments of the respondents.

#### 4.3.1.14 Whether Management Information System Affect Internal Audit Effectiveness in the National Treasury.

**Table 4.17 Effect of Management Information System**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Male	119	86
Female	20	14
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020).

Most of the participants believed management information system had an effect on internal audit effectiveness in the National Treasury as accounted by 93% of the respondents. Technology is vital as it influences all aspects of the organization.

#### 4.3.1.15 Rating of statements on Management Information Systems.

Opinions were sought on Likert scale on how they could rate the statements provided on management information system. Respondents were to use 1- Strongly Agree, 2-Agree, 3- Neutral, 4-Disagree, 5-Strongly Disagree.

**Table 4.18 Statements on Management Information Systems.**

<b>Statement</b>	<b>Mean</b>	<b>SD</b>
Internal auditors have embraced technological advances in execution of the audit function.	3.205	.811
Internal auditors are aware of management information systems adopted by users.	3.382	.614
The management information systems help to assess the state of the internal controls.	2.702	.673
The use of management information systems improves on financial performance reporting.	1.546	.812
The use of MIS improve on the internal controls.	1.906	.845
The use of MIS help in detection of errors and fraud.	1.823	.643
<b><u>Composite mean and standard deviation</u></b>	<b><u>2.427</u></b>	<b><u>0.733</u></b>

Source: Author (2020)

On the respondents rating on validity of each statement as regards to management information systems as a determinant of internal audit effectiveness, statements were regarded as valid; most of the respondents agreed management information systems help assess the state of the internal controls shown with a mean of 2.702. However, majority of the participants disagreed that internal auditors have embraced technological advances in execution of the internal audit function shown with a mean of 3.205. Most of the participants disagreed that internal auditors are aware of management information systems used by users shown with a mean of 3.382. Moreover, majority of the participants agreed that the use of management information systems improves on financial performance reporting. Majority of the participants agreed that the use of management information systems helps in detection of errors and fraud shown with a mean of 1.823.

#### 4.3.1.16 Suggestion of other Elements of Management Information Systems should be embraced to Improve Internal Audit Effectiveness.

The qualitative comments of respondents were summarized in table 4.9 showing the main theme together with its frequency and respective percentages.

**Table 4.19 Suggestion of other Elements of Management Information System.**

Statement	Frequency (f)	Percentage (%)
Digitization	29	21
Advanced computer tools	13	9
Time basis information	11	8
Continuous training	49	35
Adequate resources	37	27
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020)

The world is moving to digitization of processes represented by (29, 21%) essentially of all the business operations, internal audit is an indispensable service provider in achievement of organizational goals. Therefore, digitization of the internal audit function would improve service delivery. The respondents (13, 9%) mentioned that specialized computer tools would make the internal audit function to be proactive and timely reporting would be enhanced. The inherent characteristics of technology in real time and faster processing of information would aid management to make timely decisions this was represented by (11, 8%) of the participants. Most of the participants (49, 35%) stated that continuous training in terms of the ever-changing information technology operations where the internal auditor would be on top of the game in prevention of errors and detection of fraud. Adequacy of resources at the disposal of the internal auditors would give them the capacity to perform in their activities represented by (37, 27%) of the respondents.

#### 4.3.1.17 Internal Audit Effectiveness.

Internal audit effectiveness was the dependent variable which was measured using several indicators.

#### 4.3.1.18 Whether Internal Audit Effectiveness Significantly Improves Performance in the National Treasury.

**Table 4.20 Effect on Internal Audit Effectiveness**

<b>Whether Internal Audit Effectiveness significantly improves performance in the National Treasury</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	106	76
No	33	24
<b>Total</b>	<b>139</b>	<b>100</b>

Source: Author (2020).

Most of the participants believed that internal audit effectiveness significantly improves performance in the National Treasury as accounted by 76% of the respondents.

#### 4.3.1.19 Rating of Statements on Internal Audit Effectiveness.

Opinions were sought on Likert scale on how they could rate the statements provided on internal audit effectiveness. Respondents were to use 1- Strongly Agree, 2-Agree, 3- Neutral, 4-Disagree, 5-Strongly Disagree.

**Table 4.21 Statement on Internal Audit Effectiveness.**

<b>Statement</b>	<b>Mean</b>	<b>SD</b>
The internal auditors provides timely reports to the end users and management.	2.176	1.138
There has been a remarkable increase in the number of internal audit reports.	1.786	.519
The internal audit reports ensure there is proactive decision making by top management.	1.496	.648
Internal audit timely reports contributes to the adequacy of procedures and operations of each department	1.794	.655
The internal audit reports help in mitigating risks.	1.699	.631
The internal auditing function ensures compliance to policies, rules and regulations largely of financial nature.	1.563	.467
<b><u>Composite mean and standard deviation</u></b>	<b><u>1.752</u></b>	<b><u>0.68</u></b>

Source: Author (2020)

On the respondents rating on validity of each statement as regards to internal audit effectiveness, statements were regarded as valid; majority agreed that internal auditors provide timely reports to the end users and management as shown with a mean of 2.176. Moreover, majority of the participants agreed that, there is remarkable increase in the number of internal audit reports shown with a mean of 1.786. Most of the participants strongly agreed that internal audit reports ensure there is proactive decision making by top management shown with a mean of 1.496. Most participants agreed that internal audit timely reports contribute to the adequacy of procedures and operations of each department shown by a mean of 1.794. Similarly, majority of the participants agreed that internal audit reports helps in mitigating risks shown by a mean of 1.669. This implied that internal audit reports are critical component in risk control and management. Lastly, majority of the



participants agreed that the internal auditing function ensures compliance to policies, rules and regulations largely of financial nature shown with a mean of 1.563.

### 4.3.2 Regression Findings

Regression analysis was adopted in coming up with a model for determinants of internal audit effectiveness in the National Treasury. Independent variables organization independence, training, top management support and management information systems were regressed with internal audit effectiveness. Model summary, ANOVA and summary of co-efficient were presented respectively.

#### 4.3.2.1 Organization Independence and Internal Audit Effectiveness.

In determining whether organization independence was a determinant of internal audit effectiveness, regression modelling was adopted. Model summary and ANOVA were illustrated in Table 4.11 and Table 4.12 respectively. The model was based on the following:

**Table 4.22 Model Summary for Organization Independence and Internal Audit Effectiveness.**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.850	.723	.690	3.2150

Source: Author (2020).

Predictors: (Constant) Organization Independence

Dependent Variable: Internal audit Effectiveness

Adjusted R squared being a coefficient of determination, it showed changes in independent variable and attendant variation in the dependent variable. Table 4.11 showed the adjusted R squared as .690 which indicated that 69% variation on dependent variable. Hence, organization independence contributes to 69% change in internal audit effectiveness.

**Table 4.23 ANOVA Summary for Organization Independence and Internal Audit Effectiveness.**

		ANOVA <sup>a</sup>				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	<b>0.41</b>	<b>1</b>	11.125	11.393	.043
	Residual	<b>14.160</b>	<b>138</b>	.703		
	<b>Total</b>	<b>14.201</b>	<b>139</b>			

Source: Author (2020).

Table 4.12, showed p-value of .043, which was lesser than .05. The ANOVA output table indicated that the regression model was significant in predicting internal audit effectiveness in the National Treasury.

### Hypothesis Testing

From the study findings the null hypothesis ( $H_{01}: \neq 0$ ) was rejected and conclusion made that organization independence has a positive and significant effect on internal audit effectiveness.

#### 4.3.2.2 Training and Internal Audit Effectiveness.

In determining whether training was a determinant of internal audit effectiveness, regression modelling was adopted. Model summary and ANOVA were illustrated in Table 4.13 and Table 4.14 respectively. The regression model was based on the following regression model.

**Table 4.24 Model Summary for Training and Internal Audit Effectiveness.**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.785	.721	.687	3.1143

Source: Author (2020).

Predictors: (Constant) Training

Dependent Variable: Internal Audit Effectiveness

Adjusted R squared being a coefficient of determination, it showed changes in independent variable and attendant variation in the dependent variable. Table 4.13 showed the adjusted R squared as 0.687 which indicated that 68.7% variation on dependent variable. This means 68.7% change internal audit effectiveness can be attributed to training.

**Table 4.25 ANOVA Summary for Training and Internal Audit Effectiveness.**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	<b>20.913</b>	<b>1</b>	11.913	9.418	.003
	Residual	<b>131.288</b>	<b>138</b>	.907		
	<b>Total</b>	<b>152.201</b>	<b>139</b>			

Source: Author (2020).

Table 4.14, showed p-value of .003, which was lesser than .05. The ANOVA output table indicated that the regression model was significant in predicting internal audit effectiveness in the National Treasury.

### **Hypothesis Testing**

From the study findings the null hypothesis ( $H_{02}: \neq 0$ ) was rejected and conclusion made that training has a positive and significant effect on internal audit effectiveness.

#### **4.3.2.3 Top Management Support and Internal Audit Effectiveness.**

In determining whether top management support is a determinant of internal audit effectiveness, regression modelling was adopted. Model summary and ANOVA were illustrated in Table 4.15 and Table 4.16 respectively. The model was based on the following.

**Table 4.26 Model Summary for Top management support and Internal Audit Effectiveness.**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.851	.804	.802	.32190

Source: Author (2020)

Predictors: (Constant) Top Management Support

Dependent Variable: Internal Audit Effectiveness

Adjusted R squared being a coefficient of determination, it showed changes in independent variable and attendant variation in the dependent variable. Table 4.15 showed adjusted R squared as .802 which indicated that 80.2% variation on dependent variable. This means the 80.2% change in internal audit effectiveness can be attributed to top management support.

**Table 4.27 ANOVA Summary for Top Management Support and Internal Audit Effectiveness.**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	<b>20.812</b>	<b>1</b>	10.131	9.233	.001
	Residual	<b>156.374</b>	<b>138</b>	.707		
	<b>Total</b>	<b>177.186</b>	<b>139</b>			

Source: Author (2020)

Table 4.16, showed p-value of .001, which was lesser than .05. The ANOVA output table indicated that the regression model was significant in predicting internal audit effectiveness in the National Treasury.

## Hypothesis Testing

From the study findings the null hypothesis ( $H_{03}: \neq 0$ ) was rejected and conclusion made that top management support has a positive and significant effect on internal audit effectiveness.

### 4.3.2.4 Management Information Systems and Internal Audit Effectiveness.

In determining whether management information system is a determinant of internal audit effectiveness, regression modelling was adopted. Model summary and ANOVA were illustrated in Table 4.17 and Table 4.18 respectively. The model was based on the following.

**Table 4.28 Model Summary for Management information systems and Internal Audit Effectiveness.**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.763	.705	.700	3.1901

Source: Author (2020)

Predictors: (Constant) Management Information System

Dependent Variable: Internal Audit Effectiveness

Adjusted R squared being a coefficient of determination, it showed changes in independent variable and attendant variation in the dependent variable. Table 4.15 showed adjusted R squared as .700 which indicated that 70% variation on dependent variable. Meaning 70% change in internal audit effectiveness can be explained to management information systems.

**Table 4.29 ANOVA Summary for Management Information System and Internal Audit Effectiveness.**

		ANOVA <sup>a</sup>				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.200	1	11.200	8.963	.003
	Residual	130.841	138	.802		
	<b>Total</b>	<b>140.040</b>	<b>139</b>			

Source: Author (2020)

Table 4.18, showed p-value of .003, which was lesser than .05. The ANOVA output table indicated that the regression model was significant in predicting internal audit effectiveness in the National Treasury.

### Hypothesis Testing

From the study findings the null hypothesis ( $H_{04}: \neq 0$ ) was rejected and conclusion made that management information systems has a positive and significant effect on internal audit effectiveness.

#### 4.3.2.5 Multiple Regression

The purpose was to analyze the effect of the four independent variables in aggregation on the dependent variable. Table 4.19 provides information multiple regression model summary.

Table 4.30 Multiple Regression.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.892	.812	.746	.401

Source: Author (2020)

Dependent Variable: Internal Audit Effectiveness

Predictors: (Constant) Organization Independence, Training, Top Management Support, Management information system

The multiple regression summary in Table 4.19 indicated summary of the regression analysis on independent variables: organization independence, training, top management support and management information systems and internal audit effectiveness as the dependent variable. Adjusted R squared being a coefficient of determination, it showed changes in independent variables and attendant variation in the dependent variable. Table 4.19 showed the adjusted R squared as .746 which indicated that 74.6% variation on dependent variable. Hence, it showed significant positive relationship between the internal audit effectiveness and the independent variables.

#### **ANOVA.**

Table 4.31 ANOVA.

		ANOVA <sup>a</sup>				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	<b>2.092</b>	<b>4</b>	.523	4.821	.004
	Residual	<b>11.949</b>	<b>135</b>	.090		
	<b>Total</b>	<b>14.040</b>	<b>139</b>			

Source: Author (2020)

Dependent Variable: Internal Audit Effectiveness

Predictors: (Constant) Organization Independence, Training, Top Management Support, Management information system

Table 4.20 ANOVA showed that the value of calculated F is 4.821 and the ideal value of F critical is 1.96 at 5% significance level. F calculated (4.821>1.96) being greater than F critical it indicated the model was significant.

### Beta Coefficients.

Beta coefficients denotes the level of effect of each independent variable which gives a corresponding effect on the dependent variable. A positive or a negative sign are indicative effects of the direction

**Table 4.32 Beta Coefficients.**

Model	Coefficients <sup>a</sup>		Standardized coefficients Beta	t	Sig.
	Unstandardized coefficients B	Std. error			
Constant	2.946	2.426		.836	.0044
Organization independence	.164	.187	.253	.811	.0041
Training	.153	.777	.053	.550	.0031
Top Management Support	.189	.257	.363	.332	.0018
Management Information System	.181	.147	.196	.376	.0038

Source: Author (2020)

The established regression equation becomes:

$$Y = 2.946 + 0.164x_1 + 0.153x_2 + 0.189x_3 + 0.181x_4 + \epsilon$$

Where: Y = internal audit effectiveness,  $x_1$  = organization independence,  $x_2$  = training,  $x_3$  = top management support,  $x_4$  = management information systems,  $\epsilon$  = error term.

Multiple regression model results showed, if all factors (organization independence, training, top management support and management information systems) were held constant, internal audit effectiveness intercept at 2.946. Expansion in organization independence would result to a growth in the internal audit effectiveness by .164.



Expansion in training would result to growth in the internal audit effectiveness by .153. Expansion in top management support would result to growth in the internal audit effectiveness by .189. Lastly, an expansion in management information systems would result an increase in internal audit effectiveness by 0.181. The factors under consideration were deemed statistically significant since the attained P- values were less than 0.05.

## **CHAPTER FIVE**

### **DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

The summary of findings, conclusions and recommendations on determinants of internal audit effectiveness in National Treasury were addressed in this chapter.

#### **5.2 Discussion of Findings.**

The section gives a discourse on other previous studies carried out as per the study independent variables.

##### **5.2.1 Demographic and General Information**

Age distribution showed that the respondents were old and experienced posing a challenge in terms of innovations and modernization. Hence the need for continuous training and inculcation of new methods which reflect the current information technological changes. Most of the respondents in the study had not interacted with any audit software of any kind implying that the organisation has not fully adopted the use of auditing software. Hence, curtailing internal audit effectiveness. Management information systems forms the bed rock of effectiveness as depicted by the majority of respondents who attributed most of the components connected to it.

##### **5.2.2 Organization Independence and Internal Audit Effectiveness**

Organization independence embeds the principle of quality of internal audit reports and promotes objectivity. Objectivity in decision making process is the ideal results envisioned by management in any organization. From the findings the respondents agreed that there was enough evidence provided by management which ensured objectivity of reports which further implied that the reports produced were anchored on objectivity. Organization

independence contributes significantly to timeliness of reports and objective results which underlies the core business of internal auditing. It also implied that organization independence strengthens the policies and procedures within the stipulated legal framework which are in congruence with the compliance principle. Alzeban and Gwilliam (2014) affirms that internal auditors should not be influenced by any forces that diminish their level of independence and impartiality be it internal or external. It enriches the project completion, quality and performance hence desired output of internal auditor's work. Good governance principles require fair, transparent and verifiable processes which can only be possible if and when independence is practiced professionally.

The respondents strongly agreed that there is no undue influence by management on the audit reports provided which implied that the reports are comprehensive and can be relied upon. The evidence relied upon is built on sound management practices. Al-Twajjry, Brierley and Gwilliam (2003) reiterated that freedom is a vital component enhancing effective service delivery to management. The study established that internal audit is anchored in the Public Financial Management Act 2012. This implied that the adequacy of the legal aspects driving the internal auditing service is well grounded in law. There is a standard practice in conducting internal audit services in government institutions hence expectation of internal audit staff exhibiting effectiveness. The study noted that rules and regulations allow freedom of operations by internal auditors. The regulations allow flexibility and innovativeness but within the tenets of the law. Freedom allows for constructive and rigorous operations which ensures the independence of the department. The respondents agreed that there are established procedures on how internal auditing is conducted in government. It implied that the practice as established is geared to the true

configuration of the public institutions where procedure and methods are followed. It further implied that there is predictability of the reports hence the objectivity of the audit outcomes. Masika (2013) affirms that internal audit has been structured and configured within the law grounded in rules and procedures.

Lastly the study found out that policies are well understood and easy to work with. The policies propagated by the organization are cemented on good governance in conformity with the legal aspects. This implied the expected results are achieved within the timelines provided and are implementable. This element ensures predictability of findings because the internal auditor and auditee know their expectations. The ISPPA advocates for encompassing policies and procedures which are achieved through a structured two-way reporting relationship (IIA, 2010). This would eliminate the bureaucratic and any interference brought by the reporting channels. Lee and Park (2016) posited that for successful audit, conformity to set reporting standards and meeting deadlines culminates to successful internal audit effectiveness.

### **5.2.3 Training and Internal Audit Effectiveness**

Training has been proven to give new insights, polishes old norms and eliminates undesired customs and practices. Continuous professional development focuses on specific areas of weakness giving it impetus to continuously improve and innovate within the bounds of policies, rules and regulations which are configured in the public sector financial management. It is imperative to management to continuously train internal auditors to proactively respond, actively scrutinize processes and critically examine systems that are underperforming. Training is impacting new and cementing old norms and practices. This implies that with necessary training the organization would significantly comply with the

objectives of the organization. This results in capacity building in integrating other important components of accounting and finance. Therefore, enhancing productivity of the National Treasury.

The research found out that internal auditors are competently skilled in execution of audit engagements. Hence, internal auditors are professionally developed in auditing and trained for the performance of their tasks. Therefore, it further implies the knowledge acquired gives the internal auditors more capacity to enhance their competencies. Dellai and Omri (2016) affirms the responsibility lies on the auditors to acquire the relevant qualifications and professional development to improve on the organization's operations. Participants agreed that internal auditors employ best practices in meeting client needs and expectations. It is of paramount importance for internal auditors to use the best practices to achieve the best results. The client satisfaction with the opinion of the internal auditors enhances management of expectations. Internal auditor's use of best practices implies the standardization of the methods and procedures with clear results.

In the study participants agreed that internal auditors detect error and self-report fraud. Proper training of internal auditors enhances their effectiveness. Ussahawanitchakit and Intakhan (2011) asserted that trained auditors tend to employ best practices that helps them to better perform leading to audit success. The study found that continuous training adds value to the quality of audit reports. Continuous training gives the internal auditors knowledge on the emerging, paradigms and ever-changing trends related to the public financial management. According to Belay (2012) for effective performance internal auditors with more training perform better than auditors with less training. The study found out that internal auditors are capable of making fair judgments. Subjectivity of the internal

auditors is substantially reduced by the training acquired hence pegging their decisions on sound public sector financial policies and regulations. Therefore, objectivity of the reports is enhanced against the expected performance measures. Risks, errors and frauds are detected, analyze, promptly reported and their impact measured and appropriate mitigation measures are recommended. Saren and Leung (2003) affirms that specific task training improves judgment because internal auditing is largely dependent on judgment and capacity of trained experts. The study found that respondents disagreed that internal auditors are empowered through structured career development hence, stagnation of internal auditors in one job group. This is largely attributed to lack of up to date scheme of service to resonate with the current acquired skills and competencies to widen the scope of internal auditor's capacities and capability in performing their role.

#### **5.2.4 Top Management Support and Internal Audit Effectiveness**

Senior management support has a potent message to both motivate and provide the resources that define effectiveness and efficiency. Support whether financial or non-financial always affects positively an individual and an organization as a whole. Limitation of funds has not dampened the spirits of the internal auditors; adequate assistance would definitely ensure internal audit service is working seamlessly with other departments. Collaboration and cooperation minimize non-conformity, reduces errors and fraud through the synergies built on the relationships over time. KPMG (2009) affirmed that the realization and acknowledgement of management on internal audit service drives utility and improves on overall organization's performance. Top management support is important in decision making in full realization of the targets of the business entity.

The study found that all the programs and processes are directed by top management. The organization and culture of the public sector is practiced with expected and tested results. It further implies that the top management are well versed with the programs and operations of public institutions. Dellai and Omri (2016) agreed that high administration collaboration is an essential component in entrenching of the internal audit services in an organization. The researcher found that there was continuous monitoring of outputs of internal audit staff. This implies that top management has a clear reporting line which is well understood by all concerned parties. Mihret, Kieran and Mula (2010) posited that the setting of conducive atmosphere in an organization sets the level of co-operation between auditee and internal audit staff and the extent to which performance is enhanced.

The study disagreed that senior management is committed to strengthen systems and users. Systems and end users would work seamlessly to ingrain the organization culture and performance levels envisaged by the top management. However, where there are some disconnect between the system and end users, the results would be characterized by delays and intermittent complaints. Al-Twajjry, Brierley and Gwiliam (2003) stated the extent of co-operation to the internal audit work adequately helps strengthen control systems. There was also disagreement on top management monitoring of the staff performance standards and taking appropriate measures. The study showed that internal audit service is underfunded. Hence, the internal auditors were constrained in executing their mandates on timely basis. Lastly, respondents disagreed that top management solicits for funds to support the internal audit service. This implies that action taken by top management may be subjective in term of performance. Limited funding had a negative effect on provision of necessary resources to enable efficiency and effective deployment of internal audit

services. Funds at the disposal of internal auditors is greatly related to the quality of financial reporting and performance of the internal audit services (Soh & Martinov-Bennie, 2011).

### **5.2.5 Management Information Systems and Internal Audit Effectiveness**

Prime objective of management information systems should be to assist in performing audit in the most effective and efficient manner. Implementation of management information systems in auditing has helped streamline the examination process, and increase the value of the audit findings comparison. Davidson, Goodwin and Kent (2005) asserted that organizations benefit immensely from internal audit by helping in improving operations by ensuring total compliance to procedures and policies. This would show that the implementation of MIS creates transparency and accountability in public sector financial management. Present day systems should be virtually accessible and be compatible with various devices. This implies that total adoption, integration and collaboration of information technology in business processes is crucial in the present configuration of the public sector. Technology plays a crucial role in storage, retrieval, tracking, presentation and reporting of information. Therefore, the adoption of management information systems aids the internal auditors in employing the best practices in execution of their mandates.

The study found that the management information systems help to assess the state the internal controls. Information technology is a vital component of strengthening internal controls and minimizing risks within acceptable levels. Maribe (2010) asserted that MIS enables management and other stakeholders to access dependable information for planning and decision making. The study disagreed that internal auditors have embraced technological advances in the execution of the audit function. This implied that internal



auditors have not acquired necessary skills and software in terms of information technology that can interrogate the various management information systems adopted by users. Lombardi and Vasarhelyi (2014) opined that for auditors to survive they should embrace evolution of information technology in order to give assurances that add value to actual users of financial statements.

There was disagreement that internal auditors are aware of management information systems used by users. The lack of knowledge or the technical knowhow of management information system employed by users may impede the internal auditor's role in advising those in charge of governance on the strength of control systems. The study found that the deployment of information technology improves financial performance reporting. Adoption of technology and non - reliance on manual system of financial reporting largely contributes to the use of financial reporting software's. Moon (2012) posited MIS is a robust instrument for quality of audit services for appropriate management decision making. The study agreed that utilization of management information systems helps to detect errors and fraud. This implies that internal audit has internal mechanism capable of flagging any malpractices, intentional errors and report on time for appropriate action. Pathak and Azzone (2015) reiterated that organizations should ensure that auditors have acquired requisite information technology skills that integrates effective auditing and IT for optimal performance.

#### **5.2.6 Internal Audit Effectiveness**

According to the study, internal auditors provides timely reports to end users and management. This implied the internal audit is adequately executing its mandate and gives management ample time to act and implement the recommendations of their reports. In

addition, the study affirmed that there is remarkable improvement in the quantity of audit reports. Auditors have produced the relevant reports in compliance measures set and agreed upon by the management. According to Lee and Park (2016) conformity to set reporting standards and meeting deadlines culminates to successful internal audit effectiveness. There was agreement that internal audit reports ensure proactive decision making by top management. This implied that internal audit reports are critical tools dealing with risks and entrenching governance strategies in government financial reporting. According to report on audit committee journey KPMG (2009) affirmed that the realization and acknowledgement of management on internal audit services derives utility and improves on organization overall performance.

The study found out that internal audit timely reports contribute to adequacy of procedures and operations of departments. Internal audit reports favorably influence performance of MDAs (Ministries, Departments and Agencies). The reports are pegged on proper utilization of available funds expendable at MDAs. Davidson, Goodwin and Kent (2005) asserted that the organization can immensely benefit from internal audit service by helping in improving operations and ensuring total compliance to procedures and policies. There was agreement on internal audit reports use in mitigation of risks. In addition, the study found out that internal auditing function ensures adherence to laws, rules, regulations and policies that are majorly of financial nature. This implied that internal audit reports cushions and strengthens systems acting as a buffer to risks, errors and fraud. According to Spira and Page (2003) reiterate that the focus should be improving on internal control systems, risk management and corporate governance principles.

### **5.3 Summary of Main Findings.**

Descriptive research design was adopted. The Author took a sample size 198 employees and the questionnaires were circulated through a link to their email addresses. The researcher had sought permission from the Internal Auditor General Office.

#### **5.3.1 Organization Independence and Internal Audit Effectiveness.**

The initial objective was to find out whether organization independence was a factor affecting internal audit effectiveness in the National Treasury. The findings had been sectioned based on the research questions. There were qualitative comments of the respondents. From the study majority of the participants believed that the organization independence had an effect on the dependent variable. From the findings organizational independence is crucial in meeting objectivity principle and non-interference from any quarter. The comprehensiveness of the report embeds transparency and verifiability of evidence which enriches internal effectiveness. The reports can be used for other purposes in the organization for instance in review of performance and project management for monitoring and management of risk.

Internal audit report was a yardstick to measure conformity and adherence to procedures, and policies, possessing flexibility element where the innovative tendencies are pegged on. The internal audit reports having undergone rigorous reporting lines, the final product improves effectiveness and efficiency of the internal auditing. Further, supporting other operations and governance issues which management can undertake to achieve strategic intents of the business entity. Consistency of internal auditors ensures that there is predictable outcome which has been communicated to the auditee and management hence

fostering conducive environment and minimising non-cooperation with the internal auditors.

Internal audit has embraced international set standards for auditing in financial reporting which enables them to undertake their roles within the grounded rules and regulations hence anchoring effectiveness. Direct reporting to the relevant bodies for action eliminates interference which has a clear effect on independence and the timeframe for receiving management response and implementation of internal audit recommendation. Auditee-auditor relationship builds on commitment and collaboration of the parties as auditee consider internal auditors as process owners and not as policemen who monitors business activities for finding faults and pointing failures.

### **5.3.2 Training and Internal Audit Effectiveness.**

The second objective was to find out whether training was a factor affecting internal audit effectiveness in the National Treasury. The findings had been sectioned based on the research questions. There were qualitative comments of the respondents. In the study most of the participants believed that training had an effect on dependent variable. From the findings, training has an impact on cementing old norms and practices and at the same time introducing new ones.

Internal auditors possess competencies and skills necessary to undertake their roles professionally. The knowledge and competencies enhance capacities and flexibility that ensures internal auditors handle a given audit exercise according to its unique characteristics. The best practices that internal auditor employs enhance management confidence in reinforcing weaknesses in internal control systems and satisfaction of auditee's in the performance of their roles. Training of the internal auditors improves on

the judgement levels and substantially reduces subjectivity pegging decisions on sound public sector financial policies and regulations. Continuous training provides a platform for the internal auditors to acquire relevant knowledge and embrace changing trends on emerging issues that require internal auditor's attention. These gives the internal auditors a better overview of the operations of the whole organization hence playing an important role in improving performance and ensuring management systems installed are functioning.

Sustainability of internal audit effectiveness is largely dependent on continuous professional development. This covers all the aspects of career and personal development hence necessitating continuous improvement of the tasks and activities. Training of internal auditors is an important component that requires incorporation of technology which strengthens the consumption of internal audit reports. Escalation of the internal auditors' reports ensures that other arms of the organization can respond promptly and with efficiency for satisfaction of all stakeholders.

### **5.3.3 Top Management Support and Internal Audit Effectiveness.**

The third objective was to find out whether top management support was a factor affecting internal audit effectiveness in the National Treasury. Findings had been sectioned based on the research questions. There were qualitative comments of the respondents. Most of the participants believed that top management support had an effect on dependent variable. The structured nature of the public sector organization throws the management at the centre of all activities, their support and commitment affect the general productivity of the organization sections. Similarly, internal audit effectiveness is dependent on commitment, support in terms of programs, monitoring and adequate funding availed by the top

management. Top management support entrenches co-operation, collaboration and professional working conditions in relation to their strategic objectives of an entity.

The criticality of the reports cement systems and build on strengths on internal controls. Funding of internal audit service through provision of adequate staff, equipment, AIEs for operations and security enhances the quality of internal audit reports. Strengthening of the whistle-blowing policies gives internal auditors confidence and non-interference of the process. Whistleblowing to be entrenched as an internal audit role given the nature of information at their disposal and their compelling position in offering advice, support and assurance to the management culminating in effective internal audit. Top management support through a systematic model for instance in performance contracting of the internal audit staff is critical. The performance appraisals link internal auditor performance with organization performance. In addition, it helps assess the work progress, improve on quality of work, promotes communication which ensures continuous feedback. In essence all these factors promote realization of accountability in the public service. Hence it attests to the internal audit effectiveness.

#### **5.3.4 Management Information System and Internal Audit Effectiveness.**

The fourth objective was to find out whether management information system was a factor affecting internal audit effectiveness in the National Treasury. The findings had been sectioned based on the research questions. There were qualitative comments of the respondents. From the findings, management information system acts as vital tool for internal controls and risk management. Technology serves as a pre-requisite to information dissemination and implementation of programs; internal auditors' reports can be presented in a standardised format which enforces conformity. Management information system

through its inherent characteristics of data extraction, analysis, integrity and faster fraud detection enables management to make timely decisions on internal audit reports. Hence strengthening the internal controls. The ever-changing landscape of technology demands that users of management information system to be on top of the game with the acquisition of the prerequisite skills, knowledge and attendant software.

It enables value addition, in process and practice of internal audit. From the findings there was low adoption and absorption of technology, there is manual and electronic component in filing of audit reports. The method has worked over the years and forms the bulk of evidence to be adduced in case of reference. Management information system has internal mechanism to secure all the reports and retrieval is even much easier. These therefore, necessitates the full adoption of MIS in auditing to realize the full spectrum of benefits that technology possess. Management information systems as an essential tool can be effectively used by management to minimize the exposure of risks and tracking of information for competitive advantage. MIS helps in detection of errors and fraud therefore; it reduces the impact that the risks portends to the organization. The mitigation measures put in place cushions the users of internal audit reports of adverse effects which would save the organization through non-escalation of costs and determination of contingency plans that should be put in place.

#### **5.4 Conclusion.**

Organization independence enables constructive and quality audit reports having the full backing of the law and objectivity. Internal audit function would benefit immensely on the basis of objectivity, the management giving the internal auditors room for flexibility without deviating from the core business.

For knowledge retention and skills improvement, continuous training has immense benefits that are visible and refining of the internal audit reports. Internal auditing serves as a critical support department largely enforcing compliance. Adequate training fosters professionalism and produces the expected output and achieving the general objectives of an entity.

The bulk of expectations are from the top management support, internal auditors weighted heavily on monetary and non-monetary support which largely affect their effectiveness. Communication which is unhindered ensures that response by management is swift, precise and adequate. Internal audit function should be provided with adequate funds for operations which gives them the buffer and motivation to undertake their roles.

Investment in management information systems ensures that standards are set and maintained. Management is proactive in its response and review of performance from the output churned out by internal auditors. This enables management and internal auditors to fully play their part in strengthening governance processes.

### **5.5 Recommendations.**

Strengthening of whistle-blowing policies, enactment and operationalization in the PFM Act could ensure that internal auditors are protected and not victimized when revealing frauds and scandals they may come across while undertaking their functions. Succession planning and management would ensure seamless transitions and shortening the learning curve for internal auditors hence continuation of the existence of the auditing expertise in public service.



Full implementation of technologically advanced systems is a vital component for competitiveness and effectiveness. There should be adequate budgetary provision of requisite equipment, networking and reliable internet for easier communication and faster response. These would streamline governance processes, management of risk and control systems and assisting management improving operations of organization.

### **5.6 Areas of Further Studies.**

The study was on determinants of internal audit effectiveness in Kenya. The researcher recommends for further studies on effects of electronic audits on the effectiveness of internal audit.

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## APPENDICES

### APPENDIX I : Introduction Letter



AFRICA NAZARENE  
UNIVERSITY

30<sup>th</sup>, May 2019

E-mail: [researchwriting.mba.anu@gmail.com](mailto:researchwriting.mba.anu@gmail.com)

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Our Ref: 17J03DMBA020

The Director,  
National Commission for Science,  
Technology and Innovation (NACOSTI),  
P. O. Box 30623, 00100  
Nairobi, Kenya

Dear Sir/Madam:

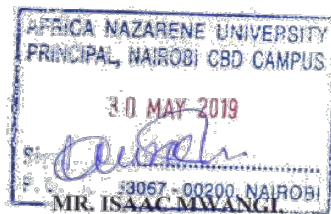
**RE: RESEARCH AUTHORIZATION FOR: MR. GRISHON NGUGI GIKONYO**

Mr. Gikonyo is a postgraduate student of Africa Nazarene University in the Master of Business Administration (MBA) program.

In order to complete his program, Mr. Gikonyo is conducting a research entitled: "Determinants of Internal Audit Effectiveness in the Public Sector in Kenya: A Case of The National Treasury"

Any assistance offered to him will be highly appreciated.

Yours Faithfully,



**AG, PRINCIPAL: NAIROBI CBD CAMPUS.**

## APPENDIX II : NACOSTI Research Authorization Letter



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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Date: **18<sup>th</sup> June 2019**

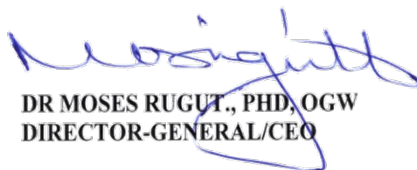
Ngugi Grishon Gikonyo  
Africa Nazarene University  
P.O. Box 53067-00200  
**NAIROBI.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Determinants of internal audit effectiveness in the public sector in Kenya: A case of the National Treasury.”* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **17<sup>th</sup> June, 2020.**

You are advised to report to **the County Commissioner, and the County Director of Education, Nairobi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

  
**DR MOSES RUGUT., PHD, OGW**  
**DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner  
Nairobi County.

The County Director of Education  
Nairobi County.



APPENDIX III : NACOSTI Research Permit

**THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013**

The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

**CONDITIONS**

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

**REPUBLIC OF KENYA**

**NACOSTI**

**National Commission for Science, Technology and Innovation**

**RESEARCH LICENSE**

**Serial No.A 25323**

**CONDITIONS: see back page**

National Commission for Science, Technology and innovation  
 P.O. Box 30623 - 00100, Nairobi, Kenya  
 TEL: 020 400 7000, 0713 788787, 0735 404245  
 Email: dg@nacosti.go.ke, registry@nacosti.go.ke  
 Website: www.nacosti.go.ke

**THIS IS TO CERTIFY THAT**

**MR. NGUGI GRISHON GIKONYO**

**of AFRICA NAZARENE UNIVERSITY,**

**0-208 NGONG HILLS has been permitted**

**to conduct research in Nairobi County**

**on the topic: DETERMINANTS OF**

**INTERNAL AUDIT EFFECTIVENESS IN THE**

**PUBLIC SECTOR IN KENYA: A CASE OF**

**THE NATIONAL TREASURY**

**for the period ending**

**17th June 2020**

**Permit No: NACOSTI/P/19/34720/31014**


**Date of Issue: 18th June 2019**

**Fee Received: Ksh 1000**

**Applicant's Signature**

**Director General**

**National Commission for Science, Technology & Innovation**



## APPENDIX IV : Research Instrument

### Questionnaire

#### INSTRUCTION:

*Please answer all the questions honestly and exhaustively by putting a tick(✓) or numbers in the appropriate box that closely matches your opinion or alternatively writing in the spaces provided where necessary.*

**NB: This information will be used STRICTLY for academic purposes only and will be treated with utmost confidence.**

#### PART A: BACKGROUND INFORMATION

1. Duty station?.....
2. Gender :  Male  Female
3. Age Bracket  18-30  31-40  41-50  51-60
4. Have you received any training on information technology?  
 Yes  No  
 If yes, please explain.....  
 .....  
 .....
5. State the level of academic/professional qualification(s) that you possess? (please tick all applicable)  
 Diploma  Under-graduate  Post Graduate  CPA
6. Please indicate the number of years the individual has been using auditing software of any type?  
 .....  
 .....  
 .....  
 .....





**PART D: TOP MANAGEMENT SUPPORT**

1. Does top management support affect internal audit effectiveness in the National Treasury?

Yes

No

2. In your own opinion, how would you rate the following statements on top management support as a factor affecting internal audit effectiveness in the National Treasury? Use a scale of 1-5 (1- Strongly Agree, 2-Agree, 3-Neutral, 4-Disagree, 5-Strongly Disagree).

Statement		1	2	3	4	5
a)	Top management is committed to strengthening systems and users.					
b)	All programs and processes are directed by the top management.					
c)	There is continuous monitoring and evaluation of the work of internal auditors					
d)	Top management monitors performance standards of the staff and take appropriate measures.					
e)	Top management provides sufficient funding and support to facilitate internal audit function.					
f)	Top management solicits for resources to support the internal audit function					

3. Suggest other top management support factors that can be used to improve internal audit effectiveness.....

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### PART E: INTERNAL AUDIT EFFECTIVENESS

1. Do you believe that internal audit effectiveness significantly improves performance in the National Treasury?

Yes

No

2. In your own opinion, how would you rate the following statements internal audit effectiveness in the National Treasury? Use a scale of 1-5 (1- Strongly Agree, 2-Agree, 3-Neutral, 4-Disagree, 5-Strongly Disagree).

Statement	1	2	3	4	5
a) The internal auditors provides timely reports to the end users and management.					
b) There has been a remarkable increase in the number of internal audit reports.					
c) The internal audit reports ensure there is proactive decision making by top management.					
d) Internal audit timely reports contributes to the adequacy of procedures and operations of each department					
e) The internal audit reports help in mitigating risks.					
f) The internal auditing function ensures compliance to policies, rules and regulations largely of financial nature.					