DETERMINANTS OF EFFECTIVENESS OF PUBLIC SECTOR AUDIT IN KENYA

BY

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE COURSE REQUIREMENT FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE IN COMMERCE (FINANCE AND ACCOUNTING) IN THE SCHOOL OF BUSINESS AT KCA UNIVERSITY.

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DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for the award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and the author duly acknowledged.

Student name…. Joyce Mueni Kanini …. Student Number……………….21/09153……

Sign………………. **Date ………………………**

I do hereby confirm that I have examined the master's dissertation of

Joyce Mueni Kanini

And have certified that all revisions that the dissertation panel and examiners recommended have been adequately addressed.

Sign: …………………Date: …………………

DR. PETER NJUGUNA

Dissertation Supervisor

ABSTRACT

The purpose of this study was to investigate the determinants of effectiveness of public sector audit (PSA) in Kenya with a key focus on the national government and its entities. The dependent variable of the study was the effectiveness of public sector audits (EPSA). Four independent variables were identified including institutional corporate governance (ICG), professional and technical competence (PC), resources availability (R), and internal control process (ICP). The research used a descriptive research design and adopted a content analysis methodology to analyze secondary data obtained from annual audit reports of the Office of the Auditor General (OAG). The study used one-year cross-sectional data for the financial year 2021/2022. The population of the study comprised of 109 financial statements of the national government and 326 accounts of MDAs, donor funds, revenue statements, and other three funds of the national government. The sampling technique used was 15% of the population which amounted to a review of 43 statements. The non-disclosures or disclosures for the variables and their indicators were coded as a "0" or "1" based on the specificity of the detail. The disclosed details were recorded in a coding sheet. STATA version 16 software was used to analyze the significance of the determinants of EPSA. The study findings showed that all independent variables had positive coefficients and were statistically significant to EPSA. Professional and technical competence was found to have the highest coefficient (PC), followed by institutional corporate governance (ICG), Internal control process (ICP), and Resource availability (R) which had a negative correlation. The major findings of the regression were that ICP can be improved by ensuring sufficient training of the staff, to further improve competence levels and help employees identify system weaknesses. Further research can be conducted by adding a fifth variable of independence of the OAG which was found by other researchers to be influenced by political matters. The research adopted qualitative methodology; further research can be conducted using similar variables but use primary data.

Keywords: Audit, Auditee, Financial Management, Financial management systems, corporate governance, Competence.

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DEDICATION

I would like to dedicate this project to KCA University which offered a conducive and friendly environment to learn and complete my master's project without any disruption. I also extend my hand to future scholars who intend to explore research options in public sector audit.

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ACRONYMS AND ABBREVIATIONS

OAG – Office of the Auditor General

PFM – Public Financial Management

PSA- Public Sector Audit

PFMA - Public Finance Management Act

INTOSAI - International Standards of Supreme Audit Institutions

SAI –Supreme Audit Institution

TERMS AND DEFINITIONS

Public Sector Auditing is a mechanism that ensures quality audits, and the credibility of audit reports, enhances accountability and transparency, specifies auditor responsibility to stakeholders, and defines types of audit engagements (INTOSAI 2019).

Value-for-money audits are operational audits conducted by the OAG to build trust, identify misuse of funds, and maximize resource utilization for essential services (OAG 2022).

Public Financial Management (PFM) refers to the efficient, transparent, accountable, and sustainable management of public funds and resources by government institutions (Public Finance Management ACT, 2012).

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The public sector audit function was an essential tool in the nineteenth century that was included in constitutional reforms of the parliament in Britain and Australia to improve government accountability and created a precedent for current practice (Bunn et al., 2018). The Westminster democratic system of government was anchored in the constitution and precedent to fully amend the independence of the auditor general. Bunn et al., (2018) noted that demand for parliamentary stronger controls over public expenditure in Britain and Australia increased throughout the seventeenth to twentieth centuries. Legislative reforms created New Public Management (NPM) in the public sector in the 1990s to create independence of the Auditor General. Public sector auditing is a complex and unexplored area and researchers in accounting have not responded to the opportunities and problems in government auditing (Hay & Cordery, 2018).

In democratic countries, accountability in public spending and the delivery of efficient and cost-effective services is essential. The public sector audit function serves as a crucial mechanism for controlling and managing scarce resources within organizations. As systems become larger and more complex, the need to have public resources used with transparency and accountability has increased. It is the mandate of the Public sector offices, which are financed partially or entirely by government budgets, to provide essential government services to society. These services encompass a wide range, including banking, education, healthcare, transportation, and more, intending to promote equal access for all members of society. This research focuses on the factors influencing the effectiveness of public sector audits in selected public sector offices in Kenyan national government ministries and departments (MDAs). The efficiency and effectiveness of public sector management operations largely depend on the effectiveness of its employees.

The environment of public sector auditing is changing with the revolution in technology and communication of audit outcomes by Supreme Audit Institutions (SAIs) is done through the Internet. The traditional news media is declining and there may be less opportunity for the public to be informed. Hay & Cordery, (2018) explained that SAIs around the world are responsible for auditing government institutions however there is a variation in the model used. For instance, three main categories included Westminster, the Napoleonic, and the Board system models. The Westminster is used in English-speaking countries which have a link to the historic Westminster parliamentary government and the SAIs are headed by the Auditor General who is supported by staff of OAG. The approach of the system of government and audit approach was exported to countries under the British Empire including Australia, New Zealand, Canada, and Britain (Bunn et al., 2018). New Zealand is an example of a country where the system was applied in early colonial times and had a similar setting as one in the UK with highly developed auditing standards regarded internationally (Hay & Cordery, 2018). The structure of public auditing in l856 in the British Empire consisted of the position of auditor of the public accounts mandated to check the executive expenditure and was enacted by the legislature. The Public Audit Act 2001 was formed by the parliament to enhance the independence of OAG in New Zealand and define its scope of work. Parker et al., (2019) study of the Australian National Audit Office (ANAO) considered public audit as a social construct that changes over time based on stakeholder perspectives and political conditions. The authors added that the concept of malleability was factored in New Zealand in public management reforms which were meant to enhance accountability.

Alexander (2019) evaluated the reports of the National Audit Office of Tanzania and discovered that violation of public resources and nonperformance of the Public Audit

Committee (PAC) and similar trends were discovered in Nigeria and Zimbabwe. African countries have legislation and parliamentary processes however, the audit practices are not well established unlike in other countries like New Zealand and Britain. It was noted that the independence and autonomy of the OAG was the main determinant of its effectiveness in securing public accountability (Hay & Cordery, 2018). Enhancement of the office required sound corporate governance like regulatory bodies, promotion of ethical standards among auditors, and stakeholder involvement in the decision-making process. Brown (2018) added that SAIs effectiveness relied on having qualified and competent personnel as prescribed by INTOSAI guidelines. The institution is expected to foster continuous learning and employ technology in data analytics to make audit process risk-oriented and ensure high-quality audits. In addition, the effectiveness of SAIs was discovered to improve where the institutions received adequate budget allocation and had appropriate infrastructure to conduct its work.

1.1.1 Public Sector Audit in Kenya

In Kenya, public sector auditing has a long history, dating back to the colonial era with the establishment of the Colonial Audit Department. Over time, auditing procedures have evolved to become more focused on detecting issues and assessing the performance of government-funded projects. The Office of the Auditor General (OAG) was established in the 2010 constitution to provide an independent opinion on entities that receive public funds. The National Treasury is responsible for budgeting at both the national and county government levels through the Public Expenditure framework, which consists of the Medium-Term Expenditure Framework (MTEF), Annual Budget, Public Financial Management System (PFM), and Monitoring and Evaluation (National Treasury, 2021). The MTEF helps prioritize government spending over three years, while the Annual Budget aligns with the available resources and revenue projections. The PFM system manages funds through various stages, including budget preparation, approval, and execution, accounting, and reporting. Monitoring and Evaluation ensure the control and evaluation of the implemented expenditure framework through regular reporting and audits. The OAG, established by the 2010 constitution, conducts financial and performance audits for national and county government entities, playing a vital role in promoting accountability, transparency, and efficient resource utilization while ensuring compliance with laws.

The framework for the audit of public entities is explained in the Public Audit Act No. 34 of 2015 by stating the functions and powers of the OAG (Public Audit Act, 2015). For instance, Article 229 explains the value of the internal controls of both county and national governments, which are used by the OAG to undertake audit activities for all state organs and public entities to ensure efficient use of the public. It also adds that the office is mandated with the responsibility of providing annual audit reports in Article 254 and performing any other duties per other legislation (The Kenyan Constitution, 2010). The Act also states that the OAG is an independent body that shall not be subject to direction by any authority. Lastly, the Act points out that the Audit Advisory Board under subsection 10 was formed to advise the OAG about the performance of their functions of review of development issues, budget estimates, remuneration, and appointment of the staff to the OAG.

The Public Finance Act of 2015 expanded the mandate of the OAG in Kenya to confirm the lawful and effective use of public resources, and it ensures adequate funding for the office. However, the OAG faces challenges due to limited resources and a wide scope of work (OAG 2023). The Act allows the OAG to determine the scope of their work and apply international audit standards. The OAG has unhindered access to all accounts upon request. The Act outlines the types of audits to be conducted by the OAG, including financial statement audits, performance or VFM audits, and forensic audits ((Public Finance Act, 2015). The comprehensive performance audit is conducted bi-annually to evaluate whether the citizens have gotten value for money in government-funded projects, while forensic audits are done to establish fraud, corruption, or other financial improprieties upon request by Parliament. The OAG oversight role is supported by other government bodies like the Parliament, the Controller of Budget, The Public Procurement Oversight Authority (PPOA), and the Ethics and Anti-Corruption Commission (EACC). The parliament contributes to the role through PAC (Public Accounts Committee) which scrutinizes OAG reports and ensures that government entities are held accountable. The PPOA is mandated with the authority to develop procurement policies, capacity building and training for government procurement officers, monitoring of procurement activities, and undertake investigations to identify malpractices. The EACC plays a role in prosecuting any cases of fraud and mismanagement reported by the OAG. The overall oversight is set to ensure monitoring and evaluation of the performance of government-funded projects to enhance PFM.

The Office of the Auditor General (OAG) is a Supreme Audit Institution (SAI) and is governed by a framework known as the International Standards of Supreme Audit Institutions (ISSAI) (INTOSAI 2019). The INTOSAI framework of professional pronouncements (IFPP) gives core principles on public sector auditing to ensure quality audits, the credibility of audit reports, enhance accountability and transparency, specify auditor responsibility to stakeholders, and define types of audit engagements. The international standard gives an authoritative process to which all SAI must comply in dispensing their services. It also provides SAIs worldwide guidelines like the Fundamental Principles of Public Sector Auditing ISSAI 100-199, SAI Organizational Requirements ISSAI 130-199, SAI Organization Guidance GUID 1900-1999, and Subject Matter Specific Guidelines 5000-5999. The standards ensure all SAIs operate effectively and consistently in their roles as auditors of public sector entities.

1.1.2 Public Sector in Kenya

The public sector in Kenya encompasses government agencies, institutions, and departments at both the national and county levels. The introduction of devolved government under the constitution led to the creation of 47 counties, each with its own executive, legislative, and judicial branches. The public sector, through various ministries, provides essential services like education, healthcare, and infrastructure, and is responsible for promoting economic growth, environmental sustainability, and social welfare. Funding for the public sector comes from taxes, grants, and loans, which should be utilized efficiently and effectively to meet public needs. However, challenges such as corruption, underfunding, extravagant spending, and limited capacity at the county level for devolution implementation persist. The Office of the Auditor General (OAG) audits the public sector, including the national government, county governments, and state parastatals, to ensure accountability, transparency, improved service delivery, and efficient use of public resources. Value-for-money audits conducted by the OAG play a crucial role in building trust, identifying misuse of funds, and maximizing resource utilization for essential services. Evaluating county governments' expenditures ensures proper use of resources, while parastatals benefit from PFM by identifying areas of resource wastage and promoting good governance and transparency in publicly funded projects and services (Yousef et al., 2015).

1.1.3 Office of the Auditor General (OAG)

The Office of the Auditor General (OAG) in Kenya is mandated to conduct independent and objective audits of the accounts and financial transactions of all public entities, including government ministries, departments, agencies, and county governments. Its primary role is to ensure transparency, accountability, and the efficient use of public funds. The OAG examines financial statements, evaluates compliance with laws and regulations, and assesses the effectiveness of internal controls within public entities. It reports its findings and recommendations to the Kenyan Parliament and other relevant authorities to facilitate oversight, improve governance, and promote fiscal responsibility in the public sector. The OAG's mandate is instrumental in promoting good governance, preventing financial misconduct, and safeguarding the interests of Kenyan citizens by ensuring that public resources are used for their intended purposes.

The office was established in the constitution of Kenya 2010 under Article 229 which mentioned the scope, independence, and responsibilities of the entity (OAG 2023). The office is headed by the Auditor General who runs it together with the Deputy Auditor Generals and other departments which include Financial Audit Department, Performance Audit Department, Special Audit Department, Quality Assurance and Compliance Department, Information Technology and Systems Audit Department, and Human Resource and Administration Department. The mandate of the body is to audit and report on the end-of-year accounts of the national and county government; the accounts of funds and authorities of national and county government; all accounts of court; accounts of every commission and any independent office in the constitution; accounts of national and senate assemblies; accounts of political parties funded by public funds; the public debt and any other account that requires the office to audit by legislation (The Kenyan Constitution 2010).

1.1.4 Role of OAG in Public Financial Management

The Office of the Auditor General (OAG) plays a critical role in public financial management. Its main function is to provide independent oversight and assurance to the public on the proper management and use of public resources (OAG 2023). This includes financial audits, performance audits, and special audits. Financial audits involve the examination of financial statements, records, and other documentation to ensure that public funds are used economically, efficiently, effectively, and in compliance with applicable laws and regulations. Performance audits, on the other hand, examine the economy, efficiency, and effectiveness of government programs, activities, and operations. Special audits are conducted on specific areas of concern that require immediate attention. Through its audits, the OAG provides information and recommendations to parliament and other stakeholders, including the public, on the management and use of public resources.

The OAG's work helps to promote transparency and accountability in public financial management and ensures that public resources are used effectively and efficiently for the benefit of the citizens (Public Finance Management ACT, 2012). In addition to its audit functions, the OAG also promotes good governance and best practices in public financial management. It provides technical assistance to government agencies, undertakes capacity-building programs, and conducts research and analysis on public financial management issues. Overall, the OAG's role in public financial management is to ensure that public resources are managed in a transparent, accountable, and efficient manner. Its work helps to promote good governance, prevent corruption and mismanagement of public funds, and enhance the delivery of public services to citizens.

1.1.5 Public Finance Management in Kenya

Public financial management in Kenya is a broad mandate that is enhanced by OAG and other oversight bodies as earlier mentioned. Public finance management in Kenya, concerning public sector audit, involves the administration and control of government finances, ensuring transparency, accountability, and efficiency in resource allocation and utilization. The key aspects of public finance management in Kenya related to public sector audit include budgeting, revenue collection, expenditure control, and financial reporting. The government formulates budgets to allocate resources for various programs and services, and the Auditor General's Office plays a critical role in auditing these budgets to ensure compliance and accuracy (OAG 2022). In revenue collection, effective taxation and revenue administration are crucial to generate funds for public spending, and the audit function evaluates the efficiency and effectiveness of these processes. Expenditure control involves monitoring government spending to prevent wastage and corruption, and audits assess adherence to procurement regulations and financial discipline. Financial reporting involves the preparation of financial statements that reflect the government's financial position, and these statements are subject to audit to verify their accuracy and adherence to accounting standards.

The country has had a series of public scandals on mismanagement of public funds, improper allocation of resources, corruption, and embezzlement which leads to inefficiencies of government-funded projects. The general public has raised concerns of heightened financial abuse and distrust of government, corruption which is affecting main infrastructural projects, and underperformance of foreign investment. Research done by Oxford Analytica (2015) collaborated that the OAG report for 2014/2015 indicated that a quarter of government money collected and spent was not accounted for.

The most famous financial mismanagement was the Anglo Leasing scandal whereby around 770 million dollars of public money was lost through awarding of fictitious contracts. Fraud and money laundering through bribery, corruption, and procurement are common crimes that have untold consequences. The 8 billion Goldenberg scandal subsidized gold exports beyond the standards in the 1990s by paying the company 35% more in Kenyan currency with the repercussion of affecting the country's GDP by 10% and resulting in an economic crisis (Oxford Analytica 2015). The EACC's responsibility is to bring to accountability the players of such actions by understanding the laws of the constitution and making use of the Public Finance Management Act and Public Audit Act. Public financial management in Kenya is enhanced through legislation established in the Constitution, Public Finance Management Act, and Public Audit Act.

1.1.5.1 The Constitution of Kenya

The Constitution outlines the principles of public finance, including the principle of openness and accountability, which is the main focus of this study. Chapter 12 of the Constitution of Kenya demonstrates the country's progress in managing revenue and expenditure (The Kenyan Constitution, 2010). It sets out the key components that must be included in a PFM system for compliance with the Constitution, including the equitable sharing of national revenue and the establishment of a Consolidated Fund and Contingencies Fund. A crucial priority for both the national and county governments is the establishment of effective Public Financial Management (PFM) systems that promote fiscal discipline, strategic resource allocation, and efficient service delivery. The Constitution also guides revenue generation and borrowing terms. These PFM provisions in Kenya mark a departure from the previous approach, which lacked a clear allocation formula and overlooked openness and accountability in PFM before 2010.

1.1.5.2 The Public Finance Management Act

The Public Finance Management Act (PFMA 2012) is a crucial law in Kenya that establishes a comprehensive framework for managing public finances. It aligns with the Constitution of Kenya 2010 and provides detailed regulations and procedures for various aspects of public financial management (PFM), including planning, budgeting, accounting, reporting, and auditing. The PFMA assigns key roles to institutions like the National Treasury and the Office of the Controller of Budget to ensure sound PFM practices (National Treasury, 2023). It also outlines the responsibilities of other actors involved in PFM, such as accounting officers, auditors, and oversight bodies. The main objectives of the PFMA are to promote transparency, accountability, and effective resource management by mandating accurate financial reporting, regular audits, and the establishment of oversight mechanisms. The

PFMA plays a critical role in Kenya's public finance management, serving as a vital tool to ensure accountability, transparency, and the efficient utilization of public resources.

1.1.5.3 The Public Audit Act

The Public Audit Act (2015) was enacted to enable the legislation of the Constitution of Kenya 2010 and other regulations to address the powers, mandate, and authority of the OAG in PFM. The PAA sets out the procedures and guidelines for the conduct of audits of public entities, including the National and County Governments, State corporations, and other public bodies. The Act establishes the role and responsibilities of the Auditor General, including the power to audit and report on the use of public resources by these entities. The Public Audit Act in Kenya established the OAG as a crucial institution responsible for auditing government finances and operations, promoting transparency and accountability, and reporting its findings to the National Assembly. The Act emphasized the OAG's independence, access to information, and follow-up mechanisms to ensure the proper use of public funds and the efficiency of government programs. The Act promotes accountability and transparency which are echoed in the constitution and PFM Act and forms relevance in the research topic. Kenya, through the OAG mandate and PAA has been able to strengthen its audit systems and enhance the country's capacity to achieve its development goals.

1.1.6 Determinants of the Effectiveness of Public Sector Audit

Cordery and Hay (2022) pointed out that the uncertainty of the changing environment resulted in constraints that affected Public sector audits. The researchers discovered that environmental disasters and resource constraints were the main factors. The availability of resources is another crucial determinant of audit effectiveness. The auditing office needs adequate financial, human, and technological resources to conduct thorough and timely audits. Sufficient funding ensured that audits covered a wide range of government activities and entities. Additionally, having a well-trained and experienced audit team is essential to effectively assess complex financial and operational aspects of government programs. Other auxiliary components included data analysis techniques and isomorphic Pressures where SAIs are obliged to establish their legitimacy by conforming to practices. Rana et al., (2022) revealed that performance audit in the public sector was impacted by social, political, and institutional factors and the underlying dynamics in institution management among government agencies.

The impact of corporate governance structures and practices in the public sector was found to significantly impact the effectiveness of audits (Cameron et al., 2021). Strong governance frameworks that emphasized transparency, accountability, and the separation of powers helped create an environment conducive to effective audits. A robust governance structure ensures that audit findings and recommendations are acted upon and that audit processes are free from undue influence or interference.

Organization for Economic Cooperation and Development (OCED) review on Finland's Independent Fiscal Institution identified that the entity lacked major components that ought to have enhanced its effectiveness (Cameron et al., 2021). The key components of the organizational chart for IFI included impact areas, competence centers, and administration resources. Impact areas were defined by project team staff, finances, and general governance and administration. Competence centers were made of digitalization, methods, and customer-centric approaches. Administration and resources included teams for planning, communications, Information technology, and human resources (Cameron et al., 2021). Highly skilled and qualified staff within the public sector were better equipped to identify irregularities, assess risks, and provide valuable recommendations. OCED encourages continuous professional development and training is essential to keep auditors updated on evolving audit techniques and regulations. Competent auditors enhance the credibility and reliability of audit reports, which are vital for decision-making and accountability.

Supreme audit institutions (SAIs) achieve their critical role of effectively managing public finances when they function with the autonomy to use their resources as they see fit (Muzurura et al., 2022). SAI can be successful in promoting PFM if the role scope of work is well defined, and understood by stakeholders, and if they are equipped with resources, tools, and powers to discharge their duties (Newiak 2022; Pombe et al., 2022). INTOSAI framework for SAI stipulated eight pillars of independence for the entities including a mandate to use public resources to meet their objectives. Kontogeorga & and Papapanagiotou (2022) noted that the pillars of independence are valuable for SAIs to be effective, meet their objectives in PFM, and maintain public trust.

According to (Newiak 2022), internal control processes were found to be paramount in ensuring robust internal controls reduce the likelihood of financial mismanagement, fraud, and errors. The OAG relies on the effectiveness of the controls to plan and conduct audits. The ability of SAI to prevent and detect corruption depended both on internal and external factors. The internal constraints included the ability to utilize resources effectively, quality of audit work, system availability and correctly accessing information during audit. The external limitations include political influence which deters SAIs efforts to fight corruption and budget constraints with a large scope of work (OAG 2022; Newiak 2022). Furthermore, limitations in mandate can impact the SAIs independence to choose the right audit approaches and implement follow-up mechanisms.

1.2 Statement of the Problem

Effective public financial management refers to the efficient, transparent, accountable, and sustainable management of public funds and resources by government institutions. The effectiveness of the Auditor General's oversight in public financial management in Kenya has been a major concern due to issues such as fraud, corruption, mismanagement, and misappropriation of public funds (Kamau et al., 2023). Despite the existence of regulations and oversight bodies, concerns remain about ensuring accountability and transparency in public finance management. The problem of the audit practice in Kenya is an issue of corporate governance which is supposed to ensure the implementation of OAG audit recommendations.

The key components of effective public financial management include transparency, accountability, sound financial planning, and robust financial control (Kamau et al., 2023). Corruption and unethical conduct in Kenya in the past decade have heightened and threatened the country's security, democratic gains, and economic growth (EACC 2017). The survey by EACC indicated that oversight institutions have failed to continually review systems of financial management in government entities which is affected by slow review of policies and laws due to the state of corruption. The country has lost billions through embezzlement of public funds in major grand scandals since 1998. For instance, Magnitude of Corruption 1990 lost over $200 million, Anglo Leasing 2001 $100 Million, the Maize scandal in 2009 amounted to $1.5 million, and the National Youth Service an estimated $ 14 million (Eboso 2014). The Anglo leasing scandal involved fraudulent government contracts for security-related projects awarded to fictitious companies that lacked transparency and accountability. The maize scandal deficiencies in PFM were a lack of transparency on agricultural subsidies and improper monitoring of the project. The NYS scandal exposed a weakness in PFM systems as it involved misappropriation through weak procurement processes, insufficient oversight, and inadequate financial controls that enabled the diversion of funds through fraudulent payments (Opongo 2022).

OAG summary report for the national government for 2021/2022 key audit findings indicated 144 qualified opinions were issued, 3 adverse and 2 disclaimer opinions. Additionally, the reports indicated unsupported expenditure from the national government Ministries, Departments, and Agencies (MDAs) and Donor Funded Projects of KES 3,257,715,422 and KES 2,576,201,715 respectively. The reports were qualified based on unsupported expenses, unauthorized spending, unreconciled long outstanding loans, non-provision of service provider's contracts, and unsupported transfer of revenue collection. A lack of performance monitoring and evaluation in tracking budget execution and assessing project performance has contributed to financial mismanagement.

Alexander (2019) found that there are challenges in the implementation of budgets for the national audit office and the related performance in undertaking audits on public resources utilization. The public institutions have a poor accounting system which provides an avenue for fraudulent activities and has affected the country's economy. Previous studies concluded that the PSA effectiveness was affected by inadequate knowledge, resources, professionalism, and corporate governance. The research was done before the PFM Act bill of 2022 and other legislations in the constitutions. Hence, there is a need to assess the effectiveness of PSA based on the recent changes in legislation.

Despite the emphasis on the importance of PFM and support by legislation, PSA faces challenges in dealing with corruption and embezzlement of public funds, which brings the big question of value for money. This study therefore aimed at discovering the factors that influence the effectiveness of PSA in both national government and its entities.

1.4 Research Objective

1.4.1 Overall objective

To examine the determinants of the effectiveness of public sector audits in Kenya.

1.4.2 Specific Objective

i. To analyze the impact of corporate governance practices on the effectiveness of public sector audits.
ii. To investigate the influence of staff professional competence on the effectiveness of public sector audits.
iii. To evaluate how resource availability impacts the effectiveness of public sector audits.
iv. To evaluate the impact of the internal control process on the effectiveness of public sector audit.

1.4.3 Research questions

i. How does corporate governance mechanisms, such as transparency and accountability, influence the effectiveness of public sector audit?
ii. How does the level of professional and technical competence of the national government and its entity staff affect the effectiveness of public sector audits?
iii. How does resource availability impact the effectiveness of public sector audit?
iv. What is the relationship between the internal control processes and the effectiveness of public sector audit?

1.5 Justification of the Study

Prior research has pointed out that audit inefficiencies in the Kenyan public sector audits were caused by a lack of implementation of a follow-up mechanism, inadequate human and financial resources for the Auditor General, poor accounting systems, and governance-related issues (Oyaro 2018). The gap in previous research did not expound on how the operational environment of the national government and its entities promote accountability, transparency, and efficient use of public funds in Kenya. The study will also assess the challenges faced by

OAG in fulfilling its mandate in public sector auditing and provide recommendations for improving the system.

1.6 Significance of the Study

The research will benefit various parties and stakeholders:

i. **The National Treasury**

The national treasury will be able to gain insights into the challenges faced by the OAG regarding inadequate resources which are obtained through its budget and how it affects its effectiveness for PSA. The findings can be used to make changes to the current structure improve accountability and ensure efficient use of public resources.

ii. **Office of the Auditor General**

The study will critically evaluate the performance of the body in conducting financial audits, the challenges it has faced, and provide recommendations on how to improve its operations. The analysis of various factors determining the effectiveness of the oversight body can be used in improving institution management and having the right measures in place to conduct its work.

iii. **Researchers and academicians**

The research will provide the basis for future research on PSA and oversight structure in Kenya which will deepen their understanding of the topic and make contributions to public sector auditing.

iv. **The general public**

The members of the public will benefit from this research because it will understand the oversight structure for PSA as it affects the transparency and accountability of the government.

v. **Donor organizations**

The findings can be used to promote improvements in the management of public resources in Kenya through improved decision-making and accountability of donor funds.

1.7 Scope of the Study

The study sought to find out the determinants of the effectiveness of public sector audit in public finance management by looking into annual audit reports for the financial year 2021/2022. The one year was selected because it will provide the latest disclosures about current trends and themes of the main objective. Annual audit reports from the OAG on the national government and its entities were selected because they are easily available, standardized, and contain a wide coverage of government activities. The reports will enable comparability of different reports and prove the validity of data obtained through coding.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter deals with theories related to the study, explores empirical studies on PSA, and suggests a theoretical framework to be adopted. The chapter focuses on the research problem keeping in mind the research questions.

2.2 Theoretical Review

Public Financial Management (PFM) aims at assessing the economy and efficiency of government-funded expenditures (Yousef et al., 2015). The theoretical framework is designed on the concepts of the overall work and scope of the OAG which include accountability and the '3 Es' of economic use, efficiency, and effectiveness. The mandate of the Auditor General is to ensure accountability of its auditee and this cultivates the principal-agent relationship supported by conspiracy and stewardship theory. Value addition to these two theories is supported by public interest theory which resembles the problem under study.

2.2.1 Institutional Theory

The theory was introduced by John Meyer and Brian Rowan in the year 1977 who wanted to explore how organizations fit in and are related in the contexts of national, state, global and societal environments. The theory provides insights into how institutions shape behavior, guide organizational practices, and influence societal outcomes. It helps understand the dynamics of stability and change in social systems and highlights the importance of institutional factors in understanding organizational and societal behavior. Hwang and Colyvas (2020) used the term "actor" as a construct to explain the proliferation of persistence and change in the society in the institutional theory. According to Hwang & Colyvas (2020), the realist model of an actor is that "people are naturally actors" but the institution theory tenet is based on “actor agency, boundaries, and internal structures are legitimated by the wider institutional system and vary with its variations” as quoted by” (Meyer, 2010; Meyer & Rowan, 1977; DiMaggio & Powell, 1983; Powell & DiMaggio, 1991). The constructive ontology of actors is that each of them has a role and identity which makes an institution a social construction made of different biological creatures. Hwang & and Colyvas (2020) defined an institution as an organizational arrangement that links roles, identities, accounts of situations, rules, practices, perspectives, and resources to create actors, meeting places, and organize relations. Actors in an organization have a responsibility to do their roles to achieve a common objective for an institution by putting forward similar efforts.

The theory was criticized for its lack of emancipatory agenda because institutions tend to overlook the larger structures and hence there is no validity of comparing the theory in small firms. However, the theory is relevant for this study as it sets the mood to conceptualize the main objective of the study and form a basis for measuring the determinants of PSA effectiveness. It is relevant in helping understand the role of institutions in shaping the behavior, practices, and effectiveness of organizations in the public sector. The theory also helps in understanding how different variables form a part of institution culture which is a concept that was referred to as a social construct of institutions made of different biological creatures. The theory supports that competence levels vary within an organization because of variations in technical knowledge and capabilities among actors or people working in the office of the OAG.

The theory adds value to the conceptual framework as it will aid in understanding the attitude of participants of the study towards the evaluation of the determinant of competence. The theory emphasizes that institutions undergo change and application of the theory will form a basis for identifying potential barriers to corporate governance and how employees at the office of the OAG understand the structures which affect their work. Overall, the theory can help identify opportunities for improving the governance, accountability, and transparency of public financial management systems, thereby contributing to more effective and efficient use of public resources.

2.2.2 Stewardship Theory

The theory was developed by Donaldson and Davis in the early 1900's as a new perspective to understand how the management and owners related in a company (Tillema & and Bogt 2016). The theory added weight to agency theory by adding value to its assumptions. Stewardship theory is a valuable framework for researching the determinants of the effectiveness of public sector audit. The model contains five aspects that apply throughout the research and include accountability and responsibility, alignment with public sector principles, showing the relationship between the stewards and principles, and talking about accountability mechanisms and resource management (Tillema & Bogt 2016).

The theory supports corporate governance and was introduced by Donaldson and Davis in 1989 (Tillema & Bogt, 2016). It argues that managers will act responsibly when left on their own and will safeguard the assets they control to ensure the success of the organization. The good stewards are not instrumentally motivated but they work collectively to attain the objectives of the principal. Stewards' motivation is intrinsic such as reputation, growth, job satisfaction, job responsibility, and stability. It takes value in bringing the picture of the steward as the one who takes pleasure in serving principal goals and foregoing their interests. The steward in this research is OAG which is an independent oversight body while Kenyan citizens are the principals. The model seeks to understand how the conditions of their work such as the existing management model, the competency of the staff, and the availability of resources; take pleasure in serving the interests of the public through enhancing accountability and transparency (Tillema & Bogt 2016). Although the theory became prominent in creating context between managers and owners, there is an issue of trust that questions the actions of the managers in putting the best interest of the owners.

Stewardship theory centers on the idea that individuals or organizations (the stewards) are responsible for managing resources on behalf of others (the principals). In the context of public sector audit, government entities are stewards entrusted with managing public funds and resources. Using stewardship theory helps emphasize the importance of accountability and responsibility in ensuring that stewards act in the best interests of the public. The theory is aligned with the goal that public resources are to be managed efficiently by emphasizing the steward's duty to act in ways that benefit the principals (the public) and ensure the responsible use of resources. Additionally, the theory will explore how government structures like the internal control process affect the effectiveness of public sector audits. Stewardship theory acknowledges the importance of accountability mechanisms to ensure that stewards act in the best interests of principals. A public sector audit is a critical accountability mechanism that assesses the steward's performance and adherence to rules and regulations. Public audits are instrumental in evaluating whether government entities are managing resources efficiently and effectively.

Stewardship Theory is a well-established theoretical framework commonly used in the field of organizational behavior and management. First, the theory aligned with the main objective of the study which is to examine the determinants of the effectiveness of the Auditor General's oversight in public financial management in Kenya. It emphasizes the responsible behavior of stewards to manage resources allocated to them safeguard the interests of the principal and ensure responsible financial management. Second, the theory provided insights into the motivations and behaviors of stewards in safeguarding the resources and interests of the principal.

Tillema & and Bogt (2016) insisted that the key concept of this theory is to see how the steward's work environment can be structured so that they attain effectiveness in implementing their objectives of accountability in public financial management. The authors suggested that collaboration and empowerment of stewards through enough resource allocation and training to foster trustworthiness will aid the objective. Last, the theory identified incentives that are organizational-based or motivators that ensure the effectiveness of a steward. The incentives like organizational culture, leadership, and resources apply to foster a good work environment for stewards. The determinants can be examined within the context of PSA to understand how they impact the effectiveness of public financial management in Kenya.

2.2.3 Public Interest Theory

Robert (2022) pointed out that the theory was developed by Albert Pigou in 1932 and argued that the government solely exists for the benefit of the general public by providing welfare services. The regulations set around the approval and utilization of public expenditure are aimed at protecting and benefiting the public by ensuring there is an effective use of financial resources in achieving the objective of government-funded projects. The theory underscores the protection of individual and collective rights of citizens. Public sector audits serve to protect citizens' rights by identifying and rectifying any mismanagement, fraud, or abuse of public resources. The theory supports that for the achievement of efficiency, transparency, and trust have to be restored to the public through public sector audits.

The theory was criticized for its ambiguity nature since it was unable to address the imperfect government regime where the structures changed. The linkage between this theory and public sector audit effectiveness is to ensure the government meets its objectives by following policy guidelines. The theory connects to the elements of economic use, efficiency, and effectiveness in executing government projects which consequently will better the welfare of the citizens. The statutory audits are carried out by the OAG to evaluate whether or not the implemented budgets take care of the welfare of the citizens and projects achieve value for money. In the context of the study, the theory provides a valuable framework to assess how the operational environment of the national government and its entities affect the outcome of PSA. The theory emphasizes efficiency and effectiveness in the use of public resources which correspond to OAG oversight to identify and address wasteful expenditures and fraud within PFM. The theory is relevant to the research topic as it supports the efficient management of public resources to benefit society and serve its interests.

Additionally, the theory identified factors influencing public interest outcomes such as legal frameworks, institutional arrangements, and the behavior of public officials can impact public interest outcomes. Lastly, the theory gave a framework for evaluating the performance of government agencies in serving public interests. Saleh & and Hamzah (2017) explored that the theory contains four dimensions of typology normative, abolitionist, process, and consensualist. Normative theories depicted public interest theories measures of performance to be assessed based on the concept of the common good of the community as compared to private benefits. The ideal way is to define ways of the options available to benefit the community which is the best way to produce guidelines, frameworks, and standards to control government agencies (Saleh & Hamzah 2017).

2.3 Empirical Review

The study is guided by stewardship theory which explains the relationship between the OAG being the steward and the public as the principal in the government (Tillema & Bogt, 2016). The principal interests are protected by the steward to promote accountability of public resources, however, the OAG in this case is appointed in the interest of both the government, the public, and the management.

Ogoro & and Simiyu (2020) researched the effectiveness of audit committees in the Kenyan public sector for parastatal to find if they met the legislative requirements and determine their effectiveness. The study suggested that the audit committees in parastatals meet legislative requirements on audit committee characteristics and this was an indication of good governance. The paper emphasized the importance of Public accounts committees and oversight bodies to fight financial misconduct and enhance the effectiveness of its performance through good governance. Additionally, good governance is fundamental in compelling an institution to be more proactive to the needs of the public, enhancing accountability and transparency to create a corrupt-free environment (Machinjike et al., 2021). Public sector audit effectiveness will depend on an environment with good governance which will promote resource facilitation and achievement of PFM values. The authors also mentioned that other factors impacted the performance of oversight institutions such as independence of the auditor, corruption, inadequate implementation of recommendations and little effort to bring officials into account, lack of technological upgrade, tedious public sector processes, unattractive remuneration, and lack of qualified auditors.

Opondo et al., (2018) conducted a survey of 97 audit committee members and 20 audit managers in public entities in Kenya to collect their views on the effectiveness of the committees in promoting accountability and transparency in public financial management. The study concluded that the audit committees were ineffective in providing oversight for public funds due to challenges like lack of financial expertise and skills among members, inadequate resources, and political influence. The study recommended capacity building to improve the oversight function of the committees. However, the study did not have regional or international information included in the literature and contained an empirical gap in examining the impact of audit committee existence in promoting accountability of public funds. The research did not address the issues of mismanagement and corruption cases that have widely affected the country's economy despite their effectiveness.

In another study, the researchers performed a comparative analysis of audit outcomes done by the supreme audit institution of four Nordic countries which included Denmark, Finland, Norway, and Sweden (Johnsen et al., 2019). The study reviewed performance audit reports produced by SAIs (Supreme Audit Institutions) between 2010 and 2015. A more in-depth case study analysis was done to understand the factors that contributed to the effectiveness of SAIs in those countries. The major issues that surrounded the effectiveness of SAIs were independence, transparency and accountability, staff capacity and resources, collaboration, and follow-up mechanisms. Comparatively, the research concentrated in Nordic countries and examining the SAIs in other regions can help identify region-specific factors that influence effectiveness and provide a broader understanding of SAI performance worldwide. The study lacked generalization as its methodologies did not use data samples which can contribute to factors that can affect the performance of other SAIs. The SAIs were perceived to be independent; they were open in their operations which helped build the trust of the public; they had well-trained staff and used modern technologies for audit; they collaborated with the stakeholders and the SAIs had funding to do a follow-up on their audit findings.

The Organization for Economic Co-operation and Development (OECD 2019) published a guide for SAI to support accountability, good governance, and responsibility. The organization discovered that a good number of SAIs were ineffective because they lacked the competence of trained staff and lacked system upgrades and training on its application in conducting audits. OECD recommended that the governments can support SAIs in different ways through funding for capacity development, commissioning of SAIs for specific audits, and advocating for legislation on SAIs independence. The study also recommended capacity development programs that can benefit SAIs such as the development of technical skills, forging strong links with stakeholders, and strengthening its corporate structure. The inputs that can improve the effectiveness of SAIs include dealing with the backlog of unaudited accounts, introducing new IT audit packages, improving the parliamentary process for SAIs, and a new HR strategy.

Mihyo et al., (2016) published a policy under OSSREA (The Organization for Social Science Research in Eastern and Southern Africa) on the need to strengthen the legal framework of the oversight role of the parliament. The key findings in the research showed that PFM oversight was affected by corruption; limited capacity and resources to edit and publish audit reports; late presentation of annual reports of government agencies; lack of enforcement mechanism on the recommendations made by the OAG and a lack of action on the accountability of public offenders. The policy article recommended the need to create links with anti-corruption agents in the county; assess the capacity of oversight bodies to enable adequate support for implementing public financial management; introduce strict policies for breach of policies; introduction of direct implementation of parliament decisions; make consultation process inclusive of all agencies; harmonize legal framework in all arms of the government and search for mechanisms to increase inter-party participation.

2.3.1 Institutional Corporate Governance

Organizations are expected to follow the principles of corporate governance of leadership, effectiveness, transparency, and accountability in public practice (Alqooti 2020). The above principles are aligned with the objective of the study and the mandate of the OAG in fulfilling their oversight responsibility in public financial management. The author defined public governance as the amalgamation of structures and processes that have been implemented by authorities to guide organization activities and give assurance that the objectives were met in an ethical and accountable manner. The governance aspects that affected public sector audit included corporate culture, existing governance structures, the management/staff, and established methodologies and procedures (Alqooti 2020). Observance of these principles enhances the prioritization of risk management which is one way of improving financial audit and reporting. In addition, effective enforcement of responsibility is linked to entities' commitment to the stakeholders and improved compliance.

Machinjike et al., (2019) in their study of factors that influence the effectiveness of the auditor general in enhancing public accountability in Zimbabwe emphasized that mechanisms of governance among public sector entities carried more weight than other factors. The study pointed to challenges such independence of the auditor and malpractices in the entity that impacted the opinions of auditors and could not effectively perform their duties. Governance is a factor that makes organizations function smoothly and creates a good working environment at the OAG's office.

Latchu & Singh (2022) explored and conducted a case study on the auditor general's perspective of how institutional governance challenges in the public sector affect information systems in South Africa and uncovered issues that were both micro and macro. The study employed textual data in annual reports from the office and used themes from thematic analysis. The authors' findings on macro concerns included changes in the leadership of the government, management structure in public offices, and lack of credible information to policy implementers. Micro issues included poor leadership, inadequate information on existing structures, poor project management, and delays in filling vacancies in the office. The study findings indicate that inadequacy of knowledge of corporate governance and poor structures can lead to failure in instituting effective public sector audits. The limitation of this study is that it relied on historical data which might not present the current situation and did not collect views from primary players of the institution.

Overall, the lack of auditor understanding of corporate governance can hinder the entity's ability to effectively oversee corporate practices and ensure that operations promote accountability and transparency. This can help ensure that they are equipped to identify and report on governance issues and that they can effectively engage with management and boards on these issues.

2.3.2 Professional and Technical Competence

Competence is the knowledge, ability, and skill that an individual possesses and can develop into expertise through training and development (Kertarajasa et al., 2019). Audit practitioners must have the technical and professional prerequisites to conduct audit work per professional standards and code of conduct. The researchers revealed that an incompetent auditor depends on the opinion of others, they lack professional skepticism, experience, and limited knowledge to complete audit tasks. The impact of incompetence in carrying out audits of government entities is that the objectivity of the OAG will not be achieved in ensuring accountability in PFM. The researchers added that competence is also the view of an individual's personality and special expertise. Previous researchers had expressed their opinions as expertise in the field of specialization, however, citing (Kertarajasa et al., 2019), it is insightful to focus on personal quality to expand the study.

Obwocha & and Mereipei (2021) researched factors that affected the effectiveness of government audits and found that the technical competence of government auditors improved the outcome by 83.2% at $< .05$ significance level. The results were interpreted to mean that a unit change in internal audit compliance by government ministries improved the effectiveness of government audits by 45.9%. Masood & Lodhi (2015) evaluated the success factors of government audits in Pakistan and discovered that the exercise was constrained by, among other factors inability of auditors to use recent technologies in audit, ineffective training institutes, weak auditing methods, lack of qualified trainers, resistance to change of using new technology, lack of power to communicate and take action on malpractices, and lack of professional competence.

Machinjike et al., (2019) examined the factors that influence the effectiveness of the auditor general in enhancing public accountability in Zimbabwe. The research employed a structured questionnaire to gauge auditor's responses on their competence. The findings of the study found that auditors' lack of relevant skills hampered the reporting structure and effectiveness of the office. In addition, independence, transparency, and availability of resources came out strongly as conditions that affected accountability and tallied with previous literature. A lack of the necessary professional and technical competence hinders the auditor from conducting effective audits and identifying issues that could impact the efficiency of the organization. Auditors need to receive ongoing training and education to enhance their professional and technical competence. This can help ensure that they have the necessary expertise to identify and report on issues and that they can effectively engage with management and the board on these issues.

2.3.3 Resources availability

Resources play a crucial role in the achievement of public sector audit objectives. Adequate financial and human resources are essential to conduct comprehensive audits that evaluate the efficiency, effectiveness, and compliance of government agencies and programs. Without sufficient funding, auditors may be constrained in their ability to hire skilled personnel, invest in audit technology and tools, and cover the necessary expenses associated with conducting audits. A shortage of experienced auditors can hinder the depth and scope of audits, potentially leading to missed irregularities or inefficiencies. Moreover, limited resources may also result in audit delays or a decreased audit frequency, which can affect the timeliness and relevance of audit findings.

In addition to financial resources, human resources are equally critical. Experienced auditors possess the skills and knowledge required to assess complex government operations and financial transactions. A lack of qualified staff can lead to suboptimal audit outcomes and a reduced ability to uncover fraudulent activities or fiscal mismanagement (Masood & Lodhi 2015). Furthermore, resources influence the audit office's ability to invest in training and professional development programs for auditors, ensuring they stay up-to-date with changing laws, regulations, and best practices. Overall, the availability and allocation of resources significantly impact the quality, scope, and effectiveness of public sector audits, ultimately influencing their ability to promote transparency, accountability, and the efficient use of public funds.

Masood & and Lodhi (2015) noted that the efficiency of government audits was affected by various aspects of financial and human resources like career development, management support, and knowledge sharing. The research emphasized that limited human, physical, financial, and intellectual was an important issue that affected. Additionally, Hwang, & Colyvas (2020) added that institutions need to have elaborate and rationalized technology as a set of resources that strengthened internal controls. The authors mentioned that resources formed an important factor in creating a social construct in an entity and further used them to empower and constrain actors differently to make them act according to prescribed rules. Financial and time constraints affected the performance of auditors in the government and this was related to interference by increased scope of review.

Statutory audits are supposed to be conducted by the end of each financial year presenting limited time to execute the audit plan. Another factor that affected government audits was information and communication infrastructure resources which delayed the conveyance of information between the auditors and auditee. The increased delays in forwarding and discussing reports to the parliament limited the efficiency of the OAG oversight in financial management. Resources present the background of each organization and a limitation in facilitation provision of adequate funds, time, access to information, and technological and physical infrastructure affect the performance of auditors in carrying out government audits. Hwang, & Colyvas (2020) explained that the rise of new institutions arises when the actors are facilitated with adequate resources to realize high value in their performance. Social skills in an institution develop skillfully based on how people can use rules and resources without limited scope. Institutions experience resource dependencies and collision with other players when there are no efficient ways to mobilize resources to support their objectives.

2.3.4 Internal control process (ICP)

Internal control is a dynamic process that is meant to adapt to the changing environment of the organization at both management and personnel levels, be able to address risks, and ensure the entity's objectives. The control processes are meant to achieve the objectives of the organization by ensuring operations are executed orderly, ethically, economically, and efficiently. The controls also aid in enhancing accountability and transparency principles, enhance compliance with laws and regulations, and safeguard the resources of the general public as supported by the public interest theory adopted in the study.

Internal control is not a standalone event or a burden added to an organization's activities; instead, it is a continuous series of actions that should be integrated into the organization's operations (Cordery, 2018). It should be an inherent part of how management runs the organization, intertwined with its infrastructure, and integrated into the essence of the organization. Building internal control into the basic management processes of planning, executing, and monitoring is more effective and cost-efficient than adding separate control procedures.

Internal control relies on the actions and behaviors of people within an organization. It is accomplished through the actions and communication of individuals who must understand their roles, responsibilities, and limits of authority. While management plays a crucial role in overseeing and implementing internal control activities, it's a tool that relates directly to the organization's objectives. Effective internal control requires active management involvement and clear communication with other personnel, as all employees have essential roles in its implementation (Serlikowska, 2022). Additionally, internal control acknowledges the influence of human nature, recognizing that people may not always communicate, understand, or perform consistently due to their unique backgrounds and abilities, which can impact and be impacted by internal control.

The reasonable assurance functionality of internal controls acknowledges that the future is uncertain and that external factors beyond an organization's control can affect its objectives. Various limitations, including human judgment errors, control breakdowns, collusion, and management override, prevent absolute assurance (INTOSAI 2019). Therefore, the cost of internal control should not exceed the benefits gained, and decisions about risk responses and controls should weigh the relative costs and benefits. Qualitative considerations, such as maintaining public confidence, may also justify controls even when the monetary amounts involved seem low relative to overall expenditures. Effective internal control design should align with organizational objectives and strike a balance to avoid excessive costs and unintended consequences.

Since the control processes are meant to effectively achieve the entity's objectives, ensure execution of operations, fulfill accountability obligations, and promote compliance with laws and regulations; the INTOSAI framework requires all Supreme Audit Institutions (SAI) to have efficient processes for examining auditee accounts and reports (INTOSAI 2019; Hay & Cordery, 2018). The implementation of quality controls is crucial to ensure that all stages of the audit process, including planning, execution, and reporting, are conducted properly (as mentioned in OECD, 2019). SAIs should incorporate internal procedures that involve a two-stage review of audit work and regularly benchmarking their performance. The INTOSAI Guidance (GUID) is a resource designed to assist Supreme Audit Institutions (SAIs) and auditors in comprehending a particular topic and implementing the applicable International Standards of Supreme Audit Institutions (ISSAIs) effectively. It guides the practical application of ISSAIs throughout various audit procedures and engagements, although it is not obligatory to follow (Serlikowska, 2022).

The benchmarking process involved various approaches, such as subjecting the SAI to external review through peer reviews, outsourcing some audit work to private sector auditors for comparison with the SAI's methodology and results, seeking reviews of aspects of its work by external and/or internal auditors, or utilizing quality assurance services offered by national accountancy bodies (INTOSAI, 2019; Serlikowska, 2022). The internal control process of the national government and its entities should have a quality system control that integrates procurement and financial processes to ensure timely, transparent, and accurate data is processed. Additionally, risk management procedures should be in place to identify any deficiencies in the system processes, and mitigate and manage diligently.

The INTOSAI framework requires the SAIs to recommend ways to embed all the activities relating to managing the entity's resources from procurement to disposal. The ICP plays a critical role in safeguarding resources like information, source documents, and financial records and promotes transparency. However, the ICP implementation faces limitations that typically limit the effectiveness of public sector audits.

Limitations on Internal Control Process (ICP)

Chan et al., (2020) asserted that an effective internal control system can offer reasonable assurance to management regarding an organization's objectives and survival but not absolute certainty. It can provide information on progress toward these objectives, but it cannot transform an ineffective manager into a proficient one. External factors like government policy changes or economic conditions may necessitate adjustments to controls or risk tolerance. Human factors and resource constraints contribute to the risk of internal control failures, making it subject to design flaws, errors, misunderstandings, and other challenges. It is unrealistic and costly to eliminate all risks through controls, so the likelihood of risk occurrence, potential impact, and control costs must be considered when establishing them. Organizational changes and management's commitment play a significant role in the effectiveness of internal control, requiring ongoing review, updates, communication, and leadership by example.

According to Fraser et al., (2022), ICP contains five components namely control environment, risk assessment, control activities, information, and communication and monitoring. The components are dynamic and they present a package of challenges, which if not monitored result in weakness in financial management systems. First, clear objectives are a prerequisite, and the control environment sets the foundation, influencing how strategies, objectives, and control activities are structured. Risk assessment helps in developing appropriate responses, with internal control activities serving as the primary strategy for risk mitigation. These activities, which include preventive, detective, and corrective measures, should be cost-effective. Effective information and communication are vital, and continuous monitoring is necessary to adapt to changing risks and objectives. These components provide a recommended framework for internal control in government, applicable to all aspects of an organization's operations. However, it's the responsibility of management to develop detailed policies, procedures, and practices tailored to their organization's needs and integrated into its operations.

According to Karunathilake et al., 2020), the components of the control environment include personal and professional integrity, competence, tone at the top, organizational structure, and human resource practices. Personal and professional integrity are critical for the success of internal control as they ensure that individuals throughout the organization act ethically and responsibly in their roles, avoiding conflicts of interest and fraudulent activities. Competence is essential to ensure that employees have the necessary skills and knowledge to carry out their control responsibilities effectively. The tone at the top, set by senior management, establishes the organizational culture and influences the behavior of employees. A lack of ethical leadership or a culture that tolerates unethical behavior can undermine internal control efforts. The organization's structure can present challenges if it lacks clear lines of authority and responsibility, making it difficult to implement and monitor control activities. Human resource practices play a crucial role in internal control by ensuring that employees are properly vetted, trained, and motivated. Weaknesses in any of these areas can pose significant challenges to the effectiveness of internal control systems, potentially leading to lapses in compliance and increased risk of fraud or errors.

Another challenge in ICP is the inadequacy of the risk assessment matrix which may lack one or all of the components of risk identification, risk evaluation, risk appetite matrix, and development response (Fraser et al., 2022). First, lack of proper risk identification, an organization may not even be aware of potential risks that could threaten its objectives. This lack of awareness means that these risks are not considered when designing control activities, leaving vulnerabilities in the system. Secondly, without risk evaluation, an organization cannot prioritize which risks are most significant and in need of mitigation efforts. As a result, resources may be misallocated, with too much emphasis on less critical risks and insufficient attention given to the most important ones. Thirdly, the absence of a risk appetite matrix means there's no clear guidance on the level of risk the organization is willing to accept to achieve its objectives. This can lead to either excessive caution or reckless risk-taking, both of which can undermine internal controls (Karunathilake et al., 2020). Lastly, without a well-defined development response to identified risks, the organization is ill-prepared to implement appropriate control activities. This can result in a lack of preventive and detective controls, leaving the organization vulnerable to various threats.

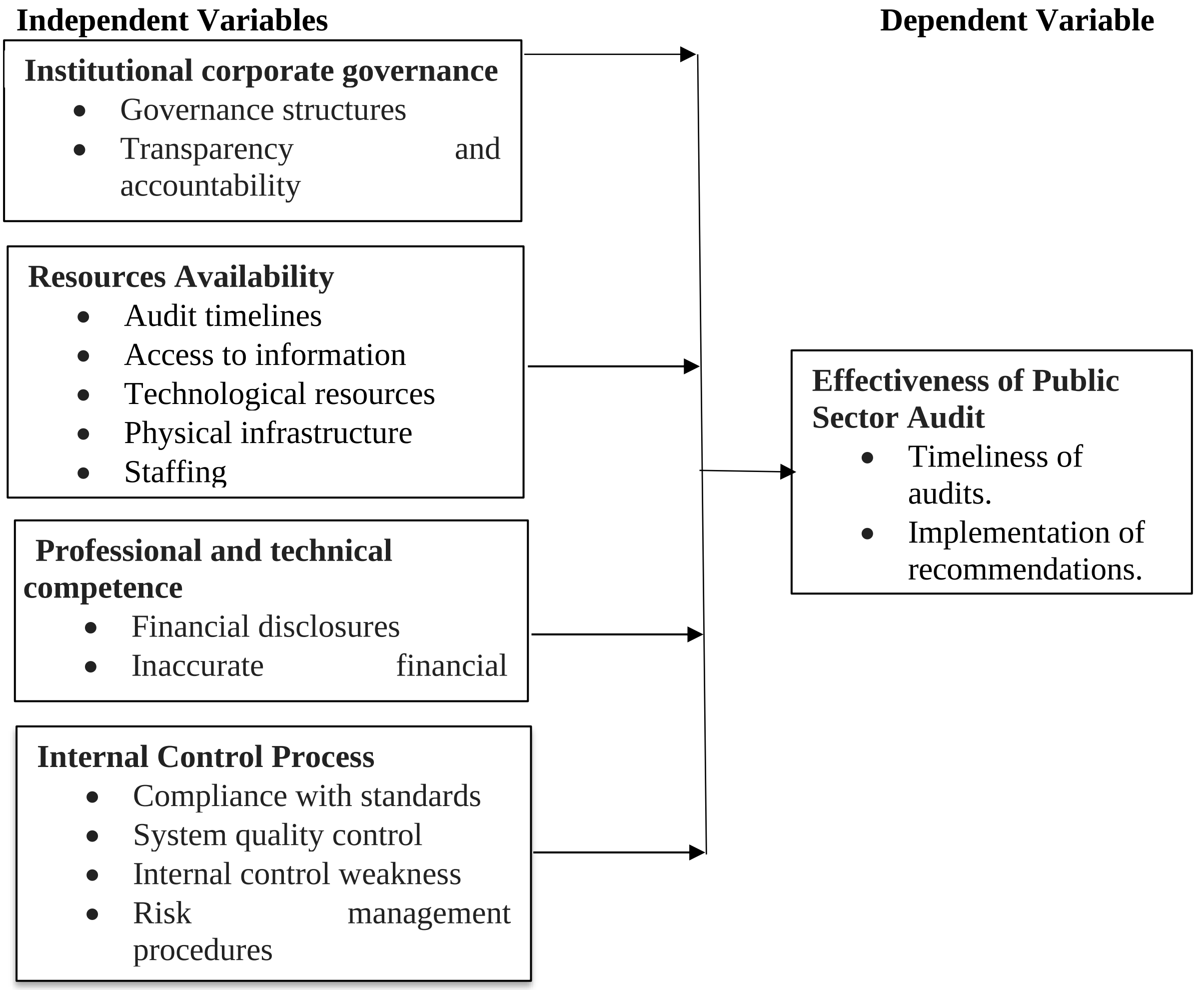
The control activities are the policies and procedures meant to aid in achieving entity objectives and address risks. They encompass a wide range of actions, both detective and preventive in nature. These activities can include procedures for authorization and approval, the segregation of duties to prevent conflicts of interest, controls over access to resources and records, verification processes to ensure accuracy, reconciliation of data or accounts, reviews of operational performance, assessments of various operations, processes, and activities, as well as supervision involving tasks like assigning, reviewing, approving, and providing guidance and training. Control activities collectively serve to safeguard an organization's assets, enhance operational efficiency, and help ensure compliance with established policies and procedures. The limitation that brings out the problem of practice in public sector audit is weaknesses in these control activities and results in ineffective outcomes.The last limitation relates to information technology controls classified under general and application controls. Weakness in the financial management system in the public sector is a result of incomplete and inaccurate information processing. The reports of the OAG have indicated instances of incomplete financial records, unsupported transactions, and disbursements which are indicators of fraud, and compromise the integrity of the integrated financial management system (IFMS).

2.4 Conceptual Framework

The conceptual framework illustrates the relationship between the research variables and potential correlations.

Figure 1

Conceptual Framework



Source: Author (2023)

Table 1
Operationalization of Variables

Category	Variable	Definition	Measurement
Independent Variables	Institutional corporate governance	Quality of national government services.	Number of each occurrence for Institutional corporate governance divided by total occurrences.
	Professional and technical competence	The quality of presentation of financial statements by national government entities.	Number of each occurrence for Institutional corporate governance divided by total occurrences.
	Resources availability	Budget allocation to the auditing entity which is OAG.	Number of each occurrence for resources divided by total occurrences.
	Internal control Process	System quality control.	Number of reported internal control discrepancies divided by total occurrences for Internal control Process.
Dependent Variable	Effectiveness of PSA	Reduced the number of unresolved prior audit issues.	Number of reported audit issues divided by total occurrences of number of audit opinions reviewed.

Source: Author (2023)

2.5.1 Measurement of variables

The effectiveness of public sector audit (PSA) is the variable that was tested in the study. It is represented by the reduced number of audit issues with indicators of unresolved prior audit issues, unimplemented recommendations, and non-establishment of follow-up mechanisms, unreliable reports, and delayed audit timelines. Dang et al., (2023) cited the Statistical Performance Index (SPI) developed by World Bank in 2004 to measure the sustainability, effectiveness, relevance, and efficiency of a country's performance for lending purposes. The SPI model has a 25^{th} percentile range of low (0% - 25%), medium (Above 25% - 50%), and high risk above 50%. A higher occurrence of audit issues indicates the ineffectiveness of PSA. The indices were used to grade each variable since the measurement scale was in percentage and gave a standard matrix.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section of this research described the procedures, approaches, and materials that were used to conduct the study and achieve the goal. The chapter described the research design used, target population, sample size, sampling procedures, research instrument, validity and reliability, data processing, and analysis.

3.2 Research Design

According to (Manterola & Otzen, 2017) a researcher should have a checklist for collecting and analyzing data that will achieve the relevance of the study. The study adopted a descriptive research design. Mayring (2019), described descriptive research as a design that focuses on understanding or describing phenomena of the subject of study. The study used content analysis to describe the characteristics of OAG and discover the relationship among different variables. Content analysis is a method that is used to conduct research for a specific context or situation using deductive reasoning for the practice of a problem of the study (Pieterse 2020). The research design was selected because the model does not involve manipulating of any variables but will aim at describing the existing condition of the features that affect the effective performance of OAG.

3.3 Target Population

The unit of analysis was national government funds and its ministries, departments, and agencies (MDAs) that are audited annually by the auditor general. The audit scope for the auditor general comprises all ministries, departments, and agencies (MDAs) and donor-funded projects of both the national and county governments. The universe of the entity, as of

June 2022, comprised a review of 109 financial statements of the national government and 326 accounts of MDAs, donor funds, revenue statements, and other funds under the national government. The total population of the study was 435 audit opinions for the national government as reported by the auditor general (OAG 2022). The data of the above-mentioned scope is contained in comprehensive reports for the financial year 2022 under the annual corporate report, report on national government funds, report on county government executives and assemblies, and report on national government.

3.4 Sample Size and Sampling Procedure

The sample of the study was 43 audit opinions obtained from OAG comprehensive reports for financial year 2022 in relation to the national government and its entities. Jones and Baran (2016) explained that sample size is a representation or estimation of the target population that is selected for the study. The study found all five comprehensive reports relevant to the study as used in literature development. The assertion was based on Wiersema (2009) who asserted that for a population of less than 30, all of them were to be chosen. According to Jones & Baran (2016), the sample size for a finite population can be calculated by using the formula below;

$$\mathbf{n = n_0 / [1 + \{(n_0 - 1) / N\}]}$$

Where n is the sample size and N is the population size.

The sampling model was also supported by Mugenda and Mugenda (2003), advised that a desirable sample size for a population of less than 10000 requires 10% to 30% representation. Therefore, the study adopted a representation of 10% which was used to analyze the contexts as they appear in opinions of the reports. The method was chosen because it eliminates bias by increasing the chances of selecting each opinion and getting reliable results with fewer errors as compared to the sampling method.

Table 2
Distribution of Audit Entities

Entity	Opinions in Annual Reports.	Sample selected (15%)
National Government	109	10
National Government Entities		
MDAs - Voted Entities	71	7
Revenue Statements	13	2
Donor Funded Projects	217	21
Other funds (The national Treasury, State Department for Planning & State Department for Co-operatives	25	3
Sub-Total	***326***	***33***
Total	**435**	**43**

Source: Office of the Auditor General Annual Reports.

3.5 Instrumentation

The research used secondary data obtained from Annual reports by OAG for the financial year 2021/2022. The research instrument used was coding scheme, which is commonly applied in descriptive research for content analysis. According to McKibben et al., (2020), since content analysis involves the systematic reading of the unit of study context and involves reading, interpreting, understanding, defining parameters, coding information contexts, and classifying information using a defined procedure. The parameters in coding were built using existing theoretical and contextual frameworks and the researcher uses deductive elements of hypothesis/research questions, reliability, generalizability, and reliability (Krippendorff 2018; McKibben et al., 2020; Pieterse 2020).

The study intended to determine the frequency of disclosure of repeating contexts or themes in the study that will provide indicators of both dependent and independent variables. To determine the level of disclosure, the coding scheme was used to allow for planning, execution, reporting, reproducing, and evaluating the contexts (Krippendorff 2018). According to Pieterse (2020), coding is a process of carefully reading transcribed data and singling out analytical units that can be coded. Hence, coding involved the use of descriptive words or symbols that were labeled to signify meaningful units in the context. Categorizing segments were created and short words were used to capture the relevance of the content which is later applied to the whole document that is being reviewed (Pieterse 2020).

The categorized segments were scored in the coding sheet using 2 levels of coding where a value of "0" will indicate not-mentioned and "1" for "mentioned. McKibben (2020) revealed that a common way of operationalizing variable segments is through priori assignment of codes with binary or dichotomous models using zero (categories absent from context) and one (categories present in contexts). The model allowed the application of statistical measures in analyzing data and can identify "other" units that do not fall within the segment of the study, hence aiding with measuring the normality of data (McKibben 2020).

Table 3
Binary score model

Score	Guide
0	Categories absent from context
1	Categories are present in contexts; short phrases, descriptive words, and meaningful units.

Source: McKibben 2020 and Pieterse 2020

According to Zhang & Wildemuth (2009), the development of categories and coding schemes requires the researcher to obtain themes from three sources which included data, previous related studies, and theories. The constant comparative method allows for systematic comparison of each text in various categories and interpreting their properties throughout the development of the coding scheme. The coding model can be modified within the course of analysis, to account for new emerging categories. The review of the literature used Google Scholar and EBSCOhost using search terms like Efficiency of office of OAG, factors for PFM, supreme audit challenges, and governance structure of audit institutions.

The literature search was completed between February and June 2023. In total, 15 articles of relevance in the literature review were included and used to identify recurring categories of both the independent and dependent variables. The themes of the study are summarized *in Table 3.4, Appendix 1.*

3.6 Data Collection

The research adopted secondary data that was obtained from the 2021/2022 annual reports of the Office of the Auditor General (OAG). The reports gave cross-sectional data since they involved audit opinions observed from one financial year. The reports disclosed items related to the determinants of the effectiveness of Public sector audits and were used to populate the coding scheme (Pieterse 2020). The disclosed items related to both independent and independent variables from the 43 sampled opinions. The frequency of disclosures gave rise to the trend of each variable of the study. The coding sheet used a percentage to determine the disclosure level by dividing the number of each occurrence by the total number of opinions observed in each report category.

3.7 Data Analysis

Data for analysis was collected using a coding scheme after reviewing the opinions of the OAG from annual corporate reports. A researcher should understand the sampling methods used for a study and apply the right methods of data analysis while using statistical packages (Heeringa, West, & Berglund 2017). The researchers described the applicability of various methods of analysis and emphasized that descriptive statistics were used to summarize characteristics of a sample population by use of measures such as mean, median, mode, and standard deviation. The authors also added that inferential statistics was applied in research for the generalization of findings about a population based on a sample using techniques such as hypothesis testing, confidence intervals, and regression analysis. The characteristics of the sample like mean, totals, and percentage of occurrence were obtained using formulas. STATA program was used to analyze the significance of the variables of the study

The following regression model was used for this study:

$$\mathbf{EPSA = \beta_0 + \beta_1 ICG + \beta_2 PC + \beta_3 R + \beta_4 ICP + \varepsilon}$$

Where;

EPSA= Effectiveness of Public sector audit

ICG= Institutional corporate governance

PC= Professional and technical competence

R = Resources availability

ICP= Internal Control Process

$\boldsymbol{\beta_0}$ = is the constant/ intercept

β1, β2, β3, β4 = coefficients of the independent variable

ε = is the residual of the model

3.8 Diagnostic test

The test of basic regression model assumptions was tested using the Multicollinearity Test and Normality Test (Schmidt & Finan 2018). The model used the normality test of the residuals to test goodness of fit test and was backed by visual inspection of data to improve the outcome.

3.8.1 Multicollinearity Test

The test was used to show the degree of correlation between variables which are determinants of the effectiveness of public sector audits. According to (Schmidt & Finan 2018), it is important to test for multicollinearity before interpreting the results of a regression analysis so that a high correlation can be removed and minimize the effect of having unreliable and unstable estimates. Schmidt & Finan (2018) clarified that when the coefficient correlation ranges from -1 to +1, the interpretation means perfect negative correlation and perfect positive correlation between the variables. On the other hand, a correlation of 0 indicates no correlation between variables and the study will support the null hypothesis. Additionally, figures below 5 were interpreted to prove the absence of multicollinearity. The method was applied because it allowed the incorporation of prior information relating to parameters of limited data. The method allowed the estimation of uncertainties which enhanced decision-making and analyzing the robustness of the results.

3.8.2 Normality Test

The residuals of the model were tested to check if they are normally distributed because the test will give the difference between the actual values of the dependent variable and the predicted values (Schmidt & Finan 2018). Kurtosis and skewness were used to test the assumption for normal distribution. According to Hanusz & Tarasińska (2015), for data to be normally distributed, skewness should range between +1 and -1 and kurtosis should range from +3 and -3.

CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

The section of this research discusses the results of the study, presents the data collected, and presents the results of the data analysis and the findings of the determinants of effectiveness of Public Sector Audit (PSA). The source of the data was from annual corporate report from the OAG for the Ministries, Departments, and Agencies of the national government. The qualitative method used to analyze data was content analysis. Themes were created from the reports that depicted the various indicators for all the variables of the research. STATA version 16 software was used to clean the data by removing the outliers and also performing analysis. The study at first presents the descriptive statistics of the data which explains the features of the sample, followed by descriptive analysis for both dependent and independent variables, empirical results, and diagnostic tests.

4.2 Results of Descriptive Analysis

Weighted descriptive statistics for the cross-sectional sample are presented in Table 4.2 for the National Government, Ministries, Departments and Agencies (MDAs), Revenue statements, Donor Funded Projects, and other funds which included the national Treasury, State Department for Planning and state Department for Co-operatives. A total of 43 audit opinions were reviewed from the annual reports of the OAG. The ideas of standard deviation, skewness, and kurtosis were founded in the 19th century to devise a systematic way of discussing distributions. The average frequency rates in the content analysis are 1 and 2 for indicators that came up during the study. As shown in table 4.2.1, 4.2.2, 4.2.3, 4.2.4 and 4.2.5.

Figure 2
Descriptive Summary Effectiveness of Public Sector Audit (EPSA)

EPSA

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	43
25%	0	0	Sum of Wgt.	43
50%	1		Mean	1.255814
		Largest	Std. Dev.	1.310998
75%	2	3		
90%	3	4	Variance	1.718715
95%	4	4	Skewness	1.50629
99%	6	6	Kurtosis	5.630495

Source: Author (2023)

As shown in Table 4.2.1, the total number of observations is 43, as earlier stated in the sampling framework since 43 audit opinions were reviewed during content analysis. EPSA has a mean of 1.255814, whereby the observations were coded as 1 or 0 to indicate the existence or non-existence of an indicator/theme in the reports. The standard deviation of the variable is 1.310998 which means that the values are close to the mean and there are minimal outliers in the data because of the higher standard deviation. The data has less variation. Additionally, the output shows that the 1% and 25% start at 0, the 50% percentile is at 1, the 75% quartile has the lowest value of 2 while highest is at 3 and the last quartile is at 6. The smallest value is 0, which in the study indicates the non-existence/non-disclosure of an indicator to a variable. The largest values are 3, 4, and 6 which indicate the number of disclosures for EPSA indicators in the reports. The sum of weights is equal to the number of observations which shows that the default data was used for analysis. The skewness of the variable is a positive number of 1.50629, hence there is asymmetry. Lastly, the kurtosis is at 5.63095 which indicates a heavy-tailed distribution.

Figure 3
Descriptive Summary Institutional Corporate Governance (ICG)

ICG				
	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	43
25%	0	0	Sum of Wgt.	43
50%	1		Mean	1.116279
		Largest	Std. Dev.	1.179372
75%	2	3		
90%	3	4	Variance	1.390919
95%	4	4	Skewness	1.094907
99%	4	4	Kurtosis	3.421832

Source: Author (2023)

Table 4.2.2, shows the descriptive statistics of the ICG variable and the total number of observations is 43, which aligns with the sampling framework to review 43 audit opinions during content analysis. The mean value for the variable is 1.116279, whereby the observations were coded as 1 or 0 to indicate the existence or non-existence of an indicator/theme in the reports. The standard deviation of the variable is 1.179372 which means that the values are close to the mean and there are no outliers in the data. The data has less variation. Additionally, the output shows that the first quartile starts at 0, the 50% percentile is at 1, the 75% quartile has a lowest value of 2 while the highest is at 3 and the last quartile is at ranges between 3 and 4 observations. The smallest value is 0, which in the study indicates the non-existence/non-disclosure of an indicator to a variable. The largest values are 3 and 4 which indicates the number of disclosures for ICG themes in the reports. The sum of weights is equal to the number of observations which shows that the default data was used for analysis. The skewness of the variable is a positive number of 1.094907, hence there is asymmetry. The kurtosis is at 3.421832 which provides a good convenient benchmark.

Figure 4
Descriptive Summary Professional and Technical Competence (PC)

PC

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	43
25%	0	0	Sum of Wgt.	43
50%	1		Mean	.744186
		Largest	Std. Dev.	.6207915
75%	1	2		
90%	1	2	Variance	.3853821
95%	2	2	Skewness	.2156658
99%	2	2	Kurtosis	2.404826

Source: Author (2023)

Table 4.2.3, shows the descriptive statistics of the PC variable and the total number of observations is 43, which aligns with the sampling framework to review 43 audit opinions during content analysis. The mean value for the variable is 0.744186, whereby the observations were coded as 1 or 0 to indicate the existence or non-existence of an indicator/theme in the reports. The standard deviation of the variable is 0.2156658 which is less than the means and shows a normal distribution and there are no outliers in the data. The data has less variation Additionally, the output shows that the first quartile starts at 0, the 50% percentile is at 1, the 75% quartile has the lowest value of 0 while the highest is at 2 and the last quartile has 2 observations. The smallest value is 0, which in the study indicates the non-existence/non-disclosure of an indicator to a variable. The largest value is 2 which indicates the number of disclosures for PC themes in the reports. The sum of weights is equal to the number of observations which shows that the default data was used for analysis. The skewness of the variable is a positive number of 0.2156658, hence there is symmetry. The kurtosis is at 2.404826 which provides a good convenient benchmark to show normal distribution. The value for kurtosis means that the data points are close to the mean and indicate normality.

Figure 5
Descriptive Summary Resources (R)

	R			
	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	43
25%	0	0	Sum of Wgt.	43
50%	1		Mean	.5813953
		Largest	Std. Dev.	.5868624
75%	1	1		
90%	1	1	Variance	.3444075
95%	1	2	Skewness	.3956775
99%	2	2	Kurtosis	2.26669

Source: Author (2023)

Table 4.2.4, shows the descriptive statistics of the R variable and the total number of observations is 43, which aligns with the sampling framework to review 43 audit opinions during content analysis. The mean value for the variable is 0.5813953, whereby the observations were coded as 1 or 0 to indicate the existence or non-existence of an indicator/theme in the reports. The standard deviation of the variable is 0.5868624 which means that the values are close to the mean and there is less variation in the dataset. Additionally, the output shows that the first quartile starts at 0, the 50% percentile is at 1, the 75% quartile has the lowest value of 0 while highest is at 1 and the last quartile is at ranges between 1 and 2 observations. The smallest value is 0, which in the study indicates the non-existence/non-disclosure of an indicator to a variable. The largest value is 2 which indicates the number of disclosures for R themes in the reports. The sum of weights is equal to the number of observations which shows that the default data was used for analysis. The skewness of the variable is a positive number of 0.3956775, hence there is Symmetry and kurtosis is at 2.26669 which provides a good convenient benchmark for the normality test.

Figure 6
Descriptive Summary Internal control process (ICP)

ICP				
	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	43
25%	0	0	Sum of Wgt.	43
50%	0		Mean	.7906977
		Largest	Std. Dev.	1.725966
75%	1	4		
90%	3	4	Variance	2.978959
95%	4	6	Skewness	2.717429
99%	8	8	Kurtosis	10.12935

Source: Author (2023)

Table 4.2.5, shows the descriptive statistics of the R variable and the total number of observations is 43, which aligns with the sampling framework to review 43 audit opinions during content analysis. The mean value for the variable is 0.7906977, whereby the observations were coded as 1 or 0 to indicate the existence or non-existence of an indicator/theme in the reports. The standard deviation of the variable is 1.725966 which means that the values are close to the mean and there is less variation in the dataset. Additionally, the output shows that the first quartile starts at 0, the 50% percentile is at 0, the 75% quartile has the lowest value of 1 while the highest is at 4 and the last quartile has the largest value of 8 observations for the indicators. The smallest value is 0, which in the study indicates the non-existence/non-disclosure of an indicator to a variable. The largest values are 4, 6, and 8, which indicates the number of disclosures for R themes in the reports. The sum of weights is equal to the number of observations which shows that the default data was used for analysis. The skewness of the variable is a positive number of 2.717429, which is greater than

+1 hence there is asymmetry. The value for kurtosis is at 10.12935 which indicates high non-variability of data set that contains outliers. The positive value shows that the distribution is peaked and possesses thick tails hence more numbers are located far from the mean.

4.3 Correlation Analysis Findings

Schmidt & Finan (2018) supported that the relevance of correlation analysis was to check how variables related to each other, and eliminate any multicollinearity before regression was performed. When the coefficient correlation ranges from -1 to +1, the interpretation means perfect negative correlation and perfect positive correlation between the variables. On the other hand, a correlation of 0 indicates no correlation between variables and the study will support the null hypothesis. Additionally, figures below 5 were interpreted to prove the absence of multicollinearity. Correlation analysis provides a perfect measure of linear relationships which can be positive, negative, or have no relation. A positive correlation is interpreted to mean that two variables move in the same direction. A high value for one variable will contribute to a high value in the other variable and vice versa. Scientifically, a larger coefficient indicates a stronger relationship between variables, and a low value would mean a weak relationship. A negative correlation is interpreted to mean the opposite movement of variables if one is changed. For instance, a high variable for one variable will result in a low value for the other. Variables that do not have any linear relationship are termed to be independent and have a zero correlation.

Correlation analysis was calculated to measure the strength and direction of the relationship between the variables. The pairwise correlation was used to test the level of relationship between variables at a 5% significance level. Table 4.3 describes the correlation between the dependent variable Effectiveness of Public Sector Audit (EPSA) and independent variables (determinants) such as institutional corporate governance (ICG), professional and technical competence (PC), resources availability (R), and internal control process (ICP). It can be seen from the results of Table 4.3 that independent variables ICG, PC, and ICP have a positive relationship with dependent variables EPSA, however, R is negatively correlated. This means that a high value in one of the independent variables will result in a high value for EPSA. On the other hand, a high value for R will result in a reduction in EPSA.

The output below shows that the correlation between EPSA and ICG is 0.3191, which is a fairly weak positive linear relationship. What the results mean is that we cannot tell whether a high value for EPSA causes ICG to improve or ICG causes EPSA to improve. However, the results support the theory that governance structures will impact the outcome of public sector audits. The correlation between EPSA and PC is essentially positively weak at 0.3749 raises a possibility that PC will result in improvement in EPSA and vice versa. On the other hand, EPSA and R have a weak negative correlation of -0.1670, to means that resources are not likely going to hurt EPSA. Lastly, EPSA and ICP have a fairly weak positive correlation of 0.3399 to means that both variables will move in a similar direction. It is worth noting that PC and ICP are negatively correlated with a coefficient of -0.0067 which means that professional and technical competence is likely to result in insufficient internal control processes which will affect the outcome of public sector audit. Each variable has a perfect positive correlation with itself as shown in the output table 4.3.

Figure 7
Correlation between variables

	epsa	icg	pc	r	icp
epsa	1.0000				
icg	0.3191	1.0000			
pc	0.3749	0.1392	1.0000		
r	-0.1670	0.0032	0.2219	1.0000	
icp	0.3399	0.0122	-0.0067	0.0290	1.0000

Source: Author (2023)

Correlation analysis was also done between the independent variables to measure linear relationships. Tables 4.3.1, 4.3.2, 4.3.3, and 4.3.4 show linear relations.

Figure 8
Pairwise correlation between ICG and ICP

	icg	icp
icg	1.0000	
icp	0.0122 0.9379	1.0000

Source: Author (2023)

The pairwise correlation between these two variables is 0.0122 and the P-value is 0.9379 which is above the significance level α =0.05. The above result indicates that the correlation between ICG and ICP is not statistically significant hence there is a non-linear relationship between the variables. However, the correlation coefficient says that there is a weak positive correlation hence an increase in the value of ICG increases ICP and vice versa.

Figure 9
Pairwise correlation between ICG and PC

	icg	pc
icg	1.0000	
pc	0.1392 0.3735	1.0000

Source: Author (2023)

The pairwise correlation between these two variables is 0.1392 and the P-value is 0.3735 which is above the significance level α =0.05. The above result indicates that the correlation between ICG and PC is not statistically significant hence there is a non-linear relationship between the variables. However, the correlation coefficient says that there is a weak positive correlation hence an increase in the value of ICG increases PC and vice versa.

Figure 10
Pairwise correlation between ICG and R

	icg	r
icg	1.0000	
r	0.0032 0.9838	1.0000

Source: Author (2023)

The pairwise correlation between these two variables is 0.0032 and the P-value is 0.9838 which is above the significance level α =0.05. The above result indicates that the correlation between ICG and R is not statistically significant hence there is a non-linear relationship between the variables. However, the correlation coefficient says that there is a weak positive correlation hence an increase in the value of ICG increases PC and vice versa.

Figure 11

Pairwise correlation between PC and R

	pc	r
pc	1.0000	
r	0.2219 0.1527	1.0000

Source: Author (2023)

The pairwise correlation between these two variables is 0.2219 and the P-value is 0.1527 which is above the significance level α =0.05. The above result indicates that the correlation between PC and R is not statistically significant hence there is a non-linear relationship between the variables. However, the correlation coefficient says that there is a weak positive correlation. Professional and technical competence emanates from the educational background, skills, and experience level of the staff which is not impacted by the resources of the organization. However, the research supports the literature by finding a positive coefficient between the variables which suggests that the availability of resources can support training and development of employees to further their competence.

Figure 12
Pairwise correlation between PC and ICP

	pc	icp
pc	1.0000	
icp	-0.0067 0.9659	1.0000

Source: Author (2023)

The pairwise correlation between these two variables is -0.0067 and the P-value is 0.9659 which is above the significance level α =0.05. The above result indicates that there is a negative correlation between PC and ICP. The P-value indicates that the variables are not statistically significant hence there is a non-linear relationship. Governance structures focus on the management of the whole organization while the level of competence in the research relates to the presentation of financial information. The non-linear relationship can be explained by the possibilities of weaknesses in accounting, and incompetence levels at preparation and presentation which do not relate to the style of management adopted at different ministries.

Figure 13
Pairwise correlation between R and ICP

	r	icp
r	1.0000	
icp	0.0290 0.8537	1.0000

Source: Author (2023)

The pairwise correlation between these two variables is 0.0290 and the P-value is 0.8537 which is above the significance level $\alpha = 0.05$. The above result indicates that the correlation between R and ICP is not statistically significant hence there is a non-linear relationship between the variables. However, the correlation coefficient says that there is a weak positive correlation. Internal control process weaknesses and risk management are some of the themes that came up during the research. Weaknesses in financial process controls have been attributed to the failure to train staff to identify and mitigate control weaknesses which is an independent factor not in the research. The output suggests that resource availability has a weak positive coefficient and ICP is affected by other factors other than resources.

4.4 Diagnostic Tests

4.4.1 Multicollinearity Test

Multicollinearity is explained by close linear relations between independent variables and can cause bias if it exists. The test was performed using the variance inflation factor (VIF). The benchmark for the test would be if VIF equal to 1 variables are not correlated, VIF between 1 and 5, will indicate moderate correlation, and beyond 5 variables are highly correlated. The results agreed with the findings of Schmidt & Finan (2018) because it returned a score of 1.04 indicating the absence of multicollinearity as shown in Table 4.5 below.

Figure 14
Variance Inflation Factor

. vif

Variable	VIF	1/VIF
pc	1.07	0.931374
r	1.05	0.949029
icg	1.02	0.979632
icp	1.00	0.998777
Mean VIF	1.04	

Source: Author (2023)

4.4.2 Normality Test

The study used skewness and kurtosis to test the assumption of normal distribution. Hanusz & Tarasińska (2015) test for normality set parameters for skewness at +1 and -1 and Kurtosis at +3 and -3. The output of the model fit in the described ranges, hence, the data were assumed to be normally distributed.

Figure 15
Normality Test

Skewness/Kurtosis tests for Normality

				joint	
Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
epsa	43	0.0003	0.0075	15.68	0.0004
epsa	43	0.0003	0.0075	15.68	0.0004
icg	43	0.0040	0.3078	8.09	0.0175
pc	43	0.5173	0.4614	1.01	0.6048
r	43	0.2425	0.2633	2.79	0.2478
icp	43	0.0000	0.0001	30.95	0.0000

Source: Author (2023)

4.5 Regression Analysis and Findings

In this study, the research tried to scrutinize how institutional corporate governance (ICG), professional and technical competence (PC), Resource availability, and internal control process (ICP) impact the effectiveness of PSA.

Figure 16
Regression analysis results

```
. regress epsa icg pc r icp

      Source |       SS           df       MS      Number of obs   =        43
-------------+----------------------------------   F(4, 38)        =      6.22
       Model |  28.5495146         4  7.13737866   Prob > F        =    0.0006
    Residual |  43.6365319        38  1.14832979   R-squared       =    0.3955
-------------+----------------------------------   Adj R-squared   =    0.3319
       Total |  72.1860465        42  1.71871539   Root MSE        =    1.0716

------------------------------------------------------------------------------
        epsa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         icg |   .2890172   .1416532     2.04   0.048     .0022553     .575779
          pc |   .8451435   .2759948     3.06   0.004     .2864212    1.403866
           r |  -.5956939   .2892228    -2.06   0.046    -1.181195   -.0101929
         icp |   .2636715    .095861     2.75   0.009      .069611    .4577321
       _cons |   .4420953   .3226262     1.37   0.179    -.2110272    1.095218
```

Source: Author (2023)

Discussion

As shown in Table 4.4 above, the R square (R2) of the model is 0.3955. This means that 39.55% is explained by variation in the four variables in the study and 60.45% of the variance in EPSA was explained by other factors not in the study. This is a fairly moderate model. The research opens a gap for other researchers to explore the topic further on what other variables can impact public sector audit effectiveness. The model has a p-value of 0.0006 which indicates all the variables are significant at α =0.005. The model predicts that EPSA was 44.21% when all other variables are zero. The accuracy of the model in predicting the target value, which is represented by the average difference between the values predicted by the model and the actual values is 1.09 as shown by Root MSE. The value is close to zero, which means the model is moderately predicting the target value. The F-test for the model is 6.22, which is a test for the statistical significance of the regression equation as a whole. The output shows that since the F-value is greater than 4, the regression equation is statistically significant and helps us understand the relationship between the dependent and independent variables.

4.5.1 Institutional Corporate Governance (ICG) and EPSA

The study sought to answer the research question of how corporate governance mechanisms, such as transparency and accountability, influence the effectiveness of public sector audit. The themes that emanated during the review of reports included management change, transparency and accountability, corporate culture, documentation of policies, code of conduct, service delivery, and effectiveness of governance structures. The Beta value (β) demonstrates the degree to which the independent variable can explain the dependent variable. The output reveals that if the indicated effect ICG increases, the outcome improved of EPSA by 28.90%. The variable is statistically significant since it has a P-value of 0.048 which is less than ($\alpha = 0.05$).

The results of the study show that ICG significantly accounts for EPSA. The indicators of ICG that impact EPSA according to this research include transparency and accountability levels, documentation that supports audit evidence, corporate culture, and the effectiveness of governance structures. The results are in line with the study by (Alqooti 2020), which proved that institutional corporate governance was the major factor in determining EPSA. However, the 28.90% coefficient level suggests that the effectiveness of PSA can be explained by other factors like independence of the OAG and political malpractices as pointed out by Machinjike et al., (2019) and Latchu & Singh (2022).

4.5.2 Professional and Technical Competence and EPSA

The second research question wanted to find out how the level of professional and technical competence of the national government and its entity staff affect the effectiveness of public sector audits. The themes from the study that affected public sector audits surrounded the preparation and presentation of financial statements. For instance, the level of incompetence was manifested through misstatements in the financial statements, omissions, inaccuracies, use of cash accounting instead of accrual basis by some entities, non-disclosures, and lack of proper records. The coefficient value of PC is 0.8451 which means that an increase in competence level within the public sector will contribute to the effectiveness of PSA at a rate of 84.51%. The variable is statistically significant since it has a P-value of (0.004) smaller than (α= 0.05). The coefficient processes a strong significant correlation of how the level of competence impacts the outcome of public sector audits.

The results explain that indicators such as the level of training of staff within national government entities determine how well the financial statements are prepared and presented. Some of the reason for the qualification of audit reports by the OAG was misstatement, omissions, lack of proper records, non-disclosures, and inaccuracies in the financial statements of the ministries and departments. The results of the study show that competence levels affect the effectiveness of PSA. Additionally, the results are in line with Obwocha & Mereipei (2021) whose research concluded that competence improved PSA by 45.9% within government audits. Similarly, INTOSAI (2019) emphasized the need for SAIs to hire competent staff and promote continuous training for the achievement of quality work. Machinjike et al., (2019) emphasized that the auditors' lack of relevant skills hampered the reporting structure and effectiveness of the auditing office and the apparent success of PSA.

4.5.3 Resources Availability and EPSA

The coefficient value for resource availability is -0.5957 and is interpreted to mean that as the value of resources increases, the EPSA will tend to decrease. Additionally, the variable is significant since it has a P-value of (0.046) smaller than (α= 0.05). The results of the study show that resources affect the effectiveness of PSA. OAG (2022) summary report pointed out that the increasing scope of their work and reduced budget for the financial year 2021/2022 contributed to the failure to audit all institutions as required. Additionally, the timeliness of the audit has hampered the attainment of PSA since the increased scope contributed to inadequate coverage of the audit plan.

Another resource factor pointed out by this research was inefficient systems and access to information that impeded the effectiveness of the OAG in filling its mandate. On the other hand, the availability of resources to ministries and departments was found to have indicators such as Social, political, and institutional factors that impacted how resources are allocated within the national government entities. The research suggested that the availability of resources to both the OAG and the national government entities cumulatively resulted in an impact on the outcome of public sector auditing. The findings collaborate with research by Masood & Lodhi (2015) which found that among factors that affected government audits included limited human, physical, financial, and intellectual resources.

4.5.4 Internal Control Process (ICP) and EPSA

The coefficient value for resource availability is 0.2636 which means that an improvement of control processes in finance and procurement within the public sector will contribute to the effectiveness of PSA at a rate of 26.36%. The variable is statistically significant since it has a P-value of (0.009) which is smaller than ($\alpha = 0.05$). The outcome illustrates that ICP among national government entities is an important factor in determining the effectiveness of PSA. The indicators that pointed out weaknesses in control processes include inadequate risk assessment, weakness in procurement and financial reporting, integrated financial management system (IFMS) weaknesses, unsupported transactions, and non-compliance to guiding operations.

The financial control weakness in the national government and its entities is a significant factor that explains the problem of practice in public sector auditing. The research results are in line with the problem statement which was concerned with the problem of practice in the public sector. The output also responds to the question of how ICP relates to

EPSA and it can be concluded that weak control processes have a direct impact on public sector auditing. The results are in line with (INTOSAI 2019; Hay & Cordery, 2018) suggested that SAI should have efficient processes for examining auditee accounts and reports and provide recommendations that appropriately address the key audit matters and enable strengthening of internal controls for the auditee. This means that carrying out audit duties by the OAG requires understanding the weaknesses of national government entities and providing actionable recommendations to improve audit quality.

4.6 Empirical Results

The study provides empirical evidence about the positive influence the independent variables have on EPSA. According to the output of the regression, all variables have a statistically significant effect on the effectiveness of PSA at a significance level below 0.05. ICG had a coefficient of (β =0.2890) and a P-value of 0.048. The output answers the first research question by proving that institutional corporate governance is positively related to EPSA. Professional and technical competence had the highest beta value of (β = 0.8451) and 0.004 significance and answers the second research question that competence level is a determining factor in determining the effectiveness of PSA in the public sector in Kenya. Resources (R) have a significance level of 0.0.046 and (β = - 0.5957) which is negatively correlated and confirms that their availability is an important factor and responds to the third research question. There is a significant effect of internal control processes (ICP) of (0.009) and a (β = 0.2637) and responds to the fourth research question of whether ICP has an impact on the effectiveness of PSA. Therefore, the research does answer all the research questions and confirms they have a statistically significant influence on EPSA. PC has the highest Beta and is contributing a lot to EPSA as compared to other variables, followed by institutional corporate governance, internal control processes, and resource availability. Using the results of the regression model, the relationship between EPSA and the independent variables of ICG, PC R, and ICP can be summarized in the following model.

EPSA predicted = 0.4420+ 0.2890ICG+ 0.8451PC -0.5957R + 0.2637ICP

Where,

Dependent variable = EPSA (Effectiveness of public sector audit)

α = determines the level of the fitted line,

0.4420 = slope of the line

Independent variables= (Institutional corporate governance) ICG, (professional and technical competence) PC, R (resources availability) and (internal control processes) ICP

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses a summary, conclusions, and recommendations from the findings of the study.

5.2 Summary of the findings

The study aimed to determine the factors that determine the effectiveness of Public Sector Audit in Kenya, within the National Government and its entities. The study had four independent variables namely ICG (Institutional Corporate Governance), PC (professional and technical competence), R (Resources), and ICP (Internal control processes). Data was obtained from OAG annual reports for 43 audit opinions from the national government and its entities. Data was collected using content analysis and analyzed using STATA 16 software. The research sought to answer four research questions that were aligned with four specific objectives of the study. The first objective was to analyze the impact of corporate governance practices on the effectiveness of public sector audit. The second objective was to investigate the influence of staff professional and technical competence on the effectiveness of public sector audit. The third objective was to evaluate how resource availability impacts the effectiveness of public sector audit. The last objective was to evaluate the impact of the internal control process on the effectiveness of public sector audits. The regression model answered all the research questions and provided statistical evidence that the four independent variables had a significant correlation with the dependent variable EPSA.

5.2.1 Institutional Corporate Governance and EPSA

In line with the first objective of the study, the research question of how corporate governance mechanisms affect PSA did show a statistically significant impact. The regression output gave an ICG coefficient value of 28.90% with a P-value of 0.048 was below the P-value of 0.05. The research model suggested that factors such as management change and governance structures within national government entities determine the outcome of public sector audits.

5.2.2 Professional and Technical Competence and EPSA

The subsequent objective sought to understand the influence of staff competence in ensuring the effectiveness of PSA. The findings supported the research question because the variable has a significant influence on EPSA of 0.004. The variable contributed to the research by scoring an average frequency of 84.51 %. The results of the tests indicated that the variable answered the research question.

5.2.3 Resources Availability and EPSA

The third objective tested how the availability of resources can affect the effectiveness of PSA. The output showed that the variable, with a mean of -59.57% is a negative correlation however the variable was statistically significant at 0.05. The findings answered the research question of whether resources affected EPSA or not. Thus, it was concluded that resource availability has a positive and statistically significant influence on the effectiveness of PSA in Kenya.

5.2.4 Internal Control Process and EPSA

The last objective intended to find out the impact of the internal control process on the effectiveness of public sector audit. The variable had a mean accounted for 26.37% of the whole model. The test results proved a positive and statistically significant influence of resources and EPSA. The significance level was 0.009 which was below the P-value of 0.05. The study answered the research question that there is a relationship between ICP and EPSA.

5.3 Conclusions

The broad objective of the study was to find out which determinants among ICG, PC, R, and ICP affected EPSA in Kenya. The relationship was presented in a multiple linear regression. Secondary data from annual corporate reports from the office of the Auditor General were used to identify indicators for all variables during content analysis. The research generally concluded that professional and technical competence, resource availability, and internal control process jointly had a significant influence and correlated strongly with the effectiveness of PSA. Institutional corporate governance was not statistically significant but was consistent with the literature. The study supported that investing more in enhancing the competence of staff in public sector entities and auditing entities will improve the competence levels, thereby supporting the main agenda of PSA. Additionally, both the auditee and editing entity encounter resource restraint which deters quality service delivery contributes to stalled projects among national government entities, and results in the failure of the OAG to achieve 100% audit scope. The study suggested that resource availability can result in a less detrimental failure rate in PSA. Lastly, the internal control processes strengthen government processes

5.4 Recommendations for policies and practice

The results of the study indicate that public sector audit in Kenya is affected by the level of competence, corporate governance at the national government and its entities, availability of resources, and the strength or weakness of the internal control systems. Based on the results, the study was able to make recommendations to policymakers, to practice, and suggested areas for further studies.

i. Institutional corporate governance

The challenge noted with institutional corporate governance during content analysis was noncompliance to guiding principles which resulted in weaknesses in financial controls. The study recommends four ways to improve corporate governance among national government entities. Firstly, establish clear governance structures and roles with defined responsibilities for decision-making, oversight, and accountability. Implement transparency measures, such as regular reporting and disclosure of financial and operational information, to enhance accountability and public trust. The study recommends that the board take proactive measures to ensure there exists internal oversight of effective audit committees and internal audit functions within the MDAs. The auditor reports discovered a lack of transparency and accountability in ensuring adequate documentation of process flow. The study recommends that the MDAs can build trust and accountability through embracing diversity of perspectives and board effectiveness.

Secondly, appoint competent and independent board members or advisory committees to provide oversight and strategic guidance, ensuring they have the necessary expertise and are free from conflicts of interest. The other challenge was a management change, which did not ensure a smooth handover within top management and resulted in gaps in governance. The study recommends that the board of directors in the respective ministries and departments ensure appointment of key personnel is done by following guiding principles.

Thirdly, develop and enforce strong ethical standards and a code of conduct to guide the behavior of officials and employees. Fourthly, engage in robust risk management practices to identify, assess, and mitigate risks to the organization's objectives. Lastly, foster a culture of compliance with laws and regulations, and establish mechanisms for reporting and addressing internal and external concerns. By implementing these measures, national government entities can strengthen their institutional corporate governance, promoting transparency, accountability, and effective decision-making.

Fourthly, the entities should engage in robust risk management practices to identify, assess, and mitigate risks to the organization's objectives. Lastly, foster a culture of compliance with laws and regulations, and establish mechanisms for reporting and addressing internal and external concerns. By implementing these measures, national government entities can strengthen their institutional corporate governance, promoting transparency, accountability, and effective decision-making.

ii. Professional and technical competence

Effectiveness in public sector audit requires a high level of competence at all levels of national government entities. The challenges of competence during the research were identified through inaccuracies in financial statements, misstatements, use of cash accounting, improper records, non-disclosures, and the production of unreliable reports by national government entities. The study recommends four ways to improve competence. Firstly, the study recommends that national government entities should invest in ongoing training and development programs to ensure that employees stay up-to-date with the latest regulations, technologies, and best practices relevant to their roles. Encourage the pursuit of professional certifications and qualifications in relevant fields. Foster a culture of continuous learning and knowledge sharing within the organization.

Secondly, recruit and retain highly qualified personnel through competitive compensation packages, career advancement opportunities, and a supportive work environment. To increase the level of competence, the human resources manager should hire qualified staff, and initiate training and development programs that will impart knowledge.

Thirdly, establish mentorship and knowledge transfer programs to facilitate the transfer of expertise from experienced employees to newer staff members. Fourth, collaborate with external experts, consultants, and professional organizations to bring in specialized knowledge and skills when needed. Finally, the entities should conduct regular performance evaluations and provide constructive feedback to identify areas for improvement and tailor training efforts accordingly. By implementing these strategies, national government entities can enhance their technical and professional competence, leading to more effective and efficient operations.

iii. Resources availability

The National Treasury can employ several strategies to ensure that national government entities have resources on time and enhance public sector audit effectiveness. First, they can establish a robust budget planning and allocation process that is transparent, efficient, and aligned with national priorities, ensuring timely disbursement of funds to government agencies. The realization of the effectiveness of public sector audit can be ensured by the national treasury through monitoring and evaluation of national government entities based on the scope of work. The budgeting process should have an objective to prioritize timely resource allocation to ensure project needs are achieved on time. The research recommends the national treasury disburse funds on time to the entities and ensure allocation is based on the volume of work.

Second, both the auditee and the auditing entities have suffered from resource constraints which have resulted in the partial realization of their objectives. For instance, inadequate resources contributed to stalled projects which factored in as a source of qualification of the entities reports. The auditing entity experienced delayed disbursement of funds, constraints in access to information, and inadequate allocation of funds that reduced the audit scope. The Public Financial Management Act of Kenya prescribed the role of the national treasury to include strengthening financial and fiscal relations with all national government entities and county governments and supporting them in performing their functions.

Third, they should enforce strict financial reporting and compliance requirements, promoting accountability and discouraging mismanagement of resources. The measure can be achieved through, investing in modern financial management systems and technology which can streamline financial processes, enabling faster fund allocation and utilization. The national treasury should also enhance regular communication and coordination between government entities to help identify resource needs and address challenges promptly. Lastly, the national treasury should have a mechanism to ensure the projects to the national government entities are adequately prepared, appraised, and approved during the budget process before prioritization of resource allocation. Lastly, the national treasury should be in a position to train the policymakers at the MDAs to identify and prioritize the budget drivers to include them in budget proposals. The strategy will enable the MDAs to establish resource requirements for individual projects and estimate the level of provisioning within the ceiling requirements.

iv. Internal control process

The internal control processes of national governments revealed weaknesses and system quality control was not effective. For instance, the Integrated Financial Management Information System (IFMS) was not integrated into various processes, including procurement. The weakness in controls resulted in the origination of pending bills, unsupported transactions, and expenditures which did not align with public financial management principles of transparency and accountability. The policymakers should integrate IFMS with the various processes to ensure the efficiency of the system which will enhance completeness of transactions and enhance PSA function. The policymakers should design control activities in national government entities that should be suitable for the specific risks they address, consistently followed according to established plans regardless of personnel changes or workload pressures, cost-effective about the benefits they provide, and should cover all necessary aspects while remaining reasonable and directly linked to the control objectives they aim to achieve. Additionally, there should be a clear distinction of duties, authorization, and approvals, and verification to ensure compliance with policies and address the issue of unsupported expenditures. The segregation of duties will prevent conflicts of interest and promote checks and balances. The OAG should recommend regular internal audits to be conducted and snap-check evaluations to assess the effectiveness of controls and identify areas for improvement.

5.5 Recommendations for further research

The research found that all the variables had a statistically significant impact on the effectiveness of public sector audits. The model R-squared was 39.55%, which meant that 60.45% was answered by other variables not captured in the study. Thus, more studies need to be conducted on which other factors impact EPSA such as political interference, communication and leadership challenges, management support, and the existence of an effective internal audit function. Further research can focus on integrating the independence of the office of the Auditor General (OAG) and consider control variables like political environment. Further research can be conducted using similar variables by way of quantitative methods and collecting primary data to prove the results of this study since the study used qualitative approach.

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APPENDICES

Appendix I

Table 4
Literature review Themes

Themes Obtained During Literature Review		
Key Term	**Narration**	**Times noted in literature reviewed.**
Effectiveness	"Timeliness and reliability of the reports to the organizations" (Oyaro 2016).	16
Recommendation	"Mechanisms for increasing auditee cooperation on issues of accountability and harmonize legal frameworks" (Mihyo et al., 2016)	4
Governance	"Promotion of ethical standards among auditors and stakeholder involvement in the decision making process" (Hay & Cordery, 2018)	6
Organization management	"Strategy, performance management and performance measurement have all become increasingly intertwined and salient for public sector governance and accountability" (Parker 2019)	15
Culture	"Need to develop procedures that promote the internal culture of the institution, that helps understands that Quality is essential at every stage of work" (Serlikowska 2022, OAG 2022)	10
Resources	"Some executive governments have attempted to undermine the AG's ability to address policy related areas by limiting resources" (Parker 2019)	9
Timeliness	"Timely information is obtained, maintained, reported and used for decision-making" (OAG 2022)	8
Competence	"SAIs effectiveness relied on having qualified and competent personnel as prescribed by INTOSAI guidelines" (Brown 2018).	45
Audit process	"(SAI) need to have efficient processes for examining auditee accounts and reports" (INTOSAI 2019; Hay & Cordery, 2018).	5
Innovation	" Innovative audit methods and reduced bureaucracy in audit process" (Serlikowska 2022)	5
Effectiveness of internal controls	"Internal control plays an important role in preventing and minimizing the occurrence of errors and fraud "(Oyaro 2016).	103
Quality control	"SAI to apply system quality control for financial, compliance and performance audits" (Serlikowska 2022)	4

Source: Literature review.

Appendix II

Table 5
Frequency of Disclosure for all variables.

Department/Ministry	Indicators	EPSA	ICG	PC	R	ICP
National Government	Delayed projects /Methodology and procedures	0	2	0	0	0
	Effectiveness of the governance structures	3	2	2	0	1
	Noncompliance/ governance weakness	1	1	1	1	4
	Code of Conduct and Ethics	1	1	1	1	0
	Provision of quality services	2	1	1	1	0
	Transparency and accountability	1	3	0	1	1
	Cultivate a Corporate culture	1	4	0	0	1
	Management/staff change	1	1	1	2	0
MDAs - Voted Entities	Presentation of the financial statements	2	3	2	1	0
	Disclosures of public resources use in financial statement	4	2	1	1	8
	weakness of cash accounting	1	1	1	0	0
	Omissions	2	1	1	0	0
	Misstatements	1	1	1	1	0
Revenue Statements	Funds availability	1	1	1	1	1
	Delayed disbursements	1	1	1	2	1
	Reduced audit scope	0	1	0	0	0
	Enhanced the use of technology	0	1	0	1	0
	Efficient system	0	1	0	1	0
	Time availability /Short timelines	0	0	0	1	0
	Access to information	0	1	0	1	3
	Integrated Financial Management Information System(IFMS)	0	1	1	1	0
	Social, political, and institutional factors	1	0	0	0	0
Donor Funded Projects	Compliance to procurement process/E-procurement module (IFPMIS)	2	4	1	1	0
	Compliance to guiding operations	1	0	2	0	0
	IFMS discrepancies	3	2	2	1	1
	IFMS control weakness	0	0	1	1	0
	IFMS and procurement intergration	0	0	1	1	0
	System quality control /contracts	0	3	1	0	0
	Risk assessment	1	0	0	0	0
	Internal control weakness	1	1	1	1	1
	Internal controls	1	2	1	0	0
	Unsupported payments	3	0	0	0	4
	Unsupported disbursements	4	0	1	0	0
	Unsupported adjustments	2	0	1	1	0

	Pending Bills	1	0	0	0	0
	Non reporting by the entity	2	0	1	0	6
	Ineffective Internal Audit Function and Audit Committees	6	4	1	0	0
	Risk management	1	0	1	0	0
Other funds (The national Treasury, State Department for Planning & State Department for Co-operatives)	Implementation of recommendations	0	0	1	1	0
	Timeliness of audits	1	0	1	1	0
	Reliability reports	0	0	0	0	0
	Unresolved Prior Year Audit Issues	2	1	0	0	2
	Follow up mechanisms	0	1	0	0	0
	Summation	**93**	**87**	**61**	**40**	**60**

Source: Content Analysis

Appendix III

Table 6
Weighted cross sectional data

Department/Ministry	Indicators	EPSA	ICG	PC	R	ICP
National Government	Delayed projects /Methodology and procedures	0.00000	0.02299	0.00000	0.00000	0.00000
	Effectiveness of the governance structures	0.03226	0.02299	0.03279	0.00000	0.01667
	Noncompliance/ governance weakness	0.01075	0.01149	0.01639	0.02500	0.06667
	Code of Conduct and Ethics	0.01075	0.01149	0.01639	0.02500	0.00000
	Provision of quality services	0.02151	0.01149	0.01639	0.02500	0.00000
	Transparency and accountability	0.01075	0.03448	0.00000	0.02500	0.01667
	Cultivate a Corporate culture	0.01075	0.04598	0.00000	0.00000	0.01667
	Management/staff change	0.01075	0.01149	0.01639	0.05000	0.00000
MDAs - Voted Entities	Presentation of the financial statements	0.02151	0.03448	0.03279	0.02500	0.00000
	Disclosures of public resources use in financial statement	0.04301	0.02299	0.01639	0.02500	0.13333
	weakness of cash accounting	0.01075	0.01149	0.01639	0.00000	0.00000
	Omissions	0.02151	0.01149	0.01639	0.00000	0.00000
	Misstatements	0.01075	0.01149	0.01639	0.02500	0.00000
Revenue Statements	Funds availability	0.01075	0.01149	0.01639	0.02500	0.01667
	Delayed disbursements	0.01075	0.01149	0.01639	0.05000	0.01667
	Reduced audit scope	0.00000	0.01149	0.00000	0.00000	0.00000
	Enhanced the use of technology	0.00000	0.01149	0.00000	0.02500	0.00000
	Efficient system	0.00000	0.01149	0.00000	0.02500	0.00000
	Time availability /Short timelines	0.00000	0.00000	0.00000	0.02500	0.00000
	Access to information	0.00000	0.01149	0.00000	0.02500	0.05000
	Integrated Financial Management	0.00000	0.01149	0.01639	0.02500	0.00000

	Information System(IFMS)					
	Social, political, and institutional factors	0.01075	0.00000	0.00000	0.00000	0.00000
Donor Funded Projects	Compliance to procurement process/E-procurement module (IFPMIS)	0.02151	0.04598	0.01639	0.02500	0.00000
	Compliance to guiding operations	0.01075	0.00000	0.03279	0.00000	0.00000
	IFMS discrepancies	0.03226	0.02299	0.03279	0.02500	0.01667
	IFMS control weakness	0.00000	0.00000	0.01639	0.02500	0.00000
	IFMS and procurement integration	0.00000	0.00000	0.01639	0.02500	0.00000
	System quality control /contracts	0.00000	0.03448	0.01639	0.00000	0.00000
	Risk assessment	0.01075	0.00000	0.00000	0.00000	0.00000
	Internal control weakness	0.01075	0.01149	0.01639	0.02500	0.01667
	Internal controls	0.01075	0.02299	0.01639	0.00000	0.00000
	Unsupported payments	0.03226	0.00000	0.00000	0.00000	0.06667
	Unsupported disbursements	0.04301	0.00000	0.01639	0.00000	0.00000
	Unsupported adjustments	0.02151	0.00000	0.01639	0.02500	0.00000
	Pending Bills	0.01075	0.00000	0.00000	0.00000	0.00000
	Non reporting by the entity	0.02151	0.00000	0.01639	0.00000	0.10000
	Ineffective Internal Audit Function and Audit Committees	0.06452	0.04598	0.01639	0.00000	0.00000
	Risk management	0.01075	0.00000	0.01639	0.00000	0.00000
Other funds	Implementation of recommendations	0.00000	0.00000	0.01639	0.02500	0.00000
	Timeliness of audits	0.01075	0.00000	0.01639	0.02500	0.00000
	Reliability reports	0.00000	0.00000	0.00000	0.00000	0.00000
	Unresolved Prior Year Audit Issues	0.02151	0.01149	0.00000	0.00000	0.03333
	Follow up mechanisms	0.00000	0.01149	0.00000	0.00000	0.00000

Source: Excel Analysis