PUBLIC PROCUREMENT IMPLEMENTATION AND OPERATIONAL PERFORMANCE OF SERVICE STATE CORPORATIONS IN KENYA

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Public Procurement Implementation and Operational Performance of Service State Corporations in Kenya

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university

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DEDICATION

I dedicate this Thesis to My Parents, Mr. and Mrs. Obura, my Siblings, my wife Noel Josephine, my children; Ann, Rose, Megan and Fahari, who have been very supportive throughout the whole period of my study. They are the main source of encouragement in my academic journey and may God bless them abundantly.

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ACRONYMS AND ABBREVIATIONS

ADB   Asian Development Bank

APEC   Asia-Pacific Economic Cooperation

AM   Audit Managers

BIAC   Business and Industry Advisory Committee

CAROSAI Caribbean Organization of Supreme Audit Institutions

CGA   Controller General of Accounts

CIPS   Chartered Institute of Purchasing and Supply

EPP   Ethical Procurement Practices

EU   European Union

GDP   Gross Domestic Product

GOK   Government of Kenya

IAPWG   Inter Agency Procurement Working Group (IAPWG)

ICT   Information Communication Technology

ICAC   Independent Commission against Corruption

IFAD   International Fund for Agricultural Development

IFMIS   Integrated Financial Management Information System

IIA   Institute of Internal Auditors

IISD   International Institute for Sustainable Development

IPAA	Institution of Public Administration Australia
IS	Information System
ISC	Inspectorate of State Corporation
INTOSAI	International Organization of Supreme Audit Institutions
IPPF	International Professional Practice Framework
IRMS	International Records Management Standard
KMO	Kaiser- Meyer and Bartlett
LCC	Lifecycle Costing
MENA	Middle East & North Africa Region
MOF	Ministry of Finance
NARA	National Archives and Records Administration
OECD	Organization for Economic Co-operation and Development
PM	Procurement Manager
PPADA	Public Procurement and Asset Disposal Act
PPADR	Public Procurement and Asset Disposal Regulation
PPDB	Public Procurement and disposal Bill
PPDGM	Public Procurement and Disposal General Manual
PPDR	Public Procurement and Disposal Regulations
PPRA	Public Procurement Regulatory Authority
PRM	Procurement Records Management

PRMPM   Procurement records management procedures manual

PSTD   Public Sector Transformation Department

PTOPR   Presidential Taskforce on Parastatals Reforms

PWC   Price Water Coopers

SAI   Supreme Audit Institutions

SAP   Supplier Appraisal Practices

SIGMA   Support for Improvement in Governance and Management

TEP   Tender Evaluation Process

UNOPS   United Nations Office for Project Services

VFM   Value for Money

VIF   Variance Inflation Factor

VITA   Virginia Information Technology Agency

WB   World Bank

DEFINITION OF OPERATIONAL TERMS

Ethical Procurement Practices   Ethical procurement practices are accepted norms that supply chain professionals and institutions should adopt to ensure sound procurement process (Sidaeli & Athumani, 2020).

Procurement Function   This is a division within a procuring entity staffed with Procurement professionals who are officially concerned with managing the procurement and asset disposal process and reports directly to the head of procuring entity functionally and administratively. (PPADA, 2015)

Public Procurement Implementation   A Comprehensive adherence to public procurement and asset disposal process in line with the existing laws in the public sector (Rijkers, 2017).

Procurement Records Management   This is the efficient and systematic control of the creation, receipt, maintenance, use and disposal of all procurement documents, files, invoices (Mosweu & Rakemane, 2020)

Regulatory framework   These are series of policies and procedures governing procurement procedure (World Bank, 2015).

Supplier Appraisal	Supplier appraisal is defined as a business practice that is used to measure, analyze, and manage the supplier's performance in an effort to cut costs, alleviate risks, and drive continuous improvement (Fournier, 2017).
Tender Evaluation Process	Tender Evaluation Process is carried out in public procurement to select the best offer from the respective bids (Kozik, 2019).

ABSTRACT

In many economies around the world, procurement represents between 18%-42% of public spending. However, weaknesses in execution, compliance, monitoring, and lack of enforcement of existing regulations leads to poor procurement management by state agencies. Public procurement implementation is one of the most powerful and fastest ways to reduce operational costs and to systematically evaluate procurement procedures to determine whether specified criteria are met. This study establishes the influence of Public procurement implementation on operational performance of service state corporations in Kenya. The relationship between the four variables (ethical procurement practices, Tender Evaluation Process, Procurement records management and Supplier appraisal practices) represent a clear research gap. Regulatory framework was used in the study as a moderator. The study uses; Deontological Theory of Ethics, Transaction cost Theory, Records Continuum Model and Stakeholder Theory to give more insight into the study. Survey research design was adopted by the study to enable the researcher obtain data about process, situations or views at one point in time through questionnaires. Target population for this study comprised of Audit, ICT and Procurement Managers respectively of the 132 Service State Corporations in Kenya as listed in the Report of The Presidential Taskforce on Parastatals Reforms 2013. Since the study population was not homogenous, stratified sampling method was adopted to obtain a sample size. Primary data was collected through administering of questionnaires to the staff of service state corporations. The study used Cronbach alpha coefficient to determine reliability of the instrument in this study and analysis of data was done using SPSS version 21 since it allowed data sets to be loaded more easily making it user friendly. Data analysis was conducted using descriptive statistics and inferential statistics. The study findings revealed that Ethical procurement practices, Tender Evaluation Process, Procurement records management and Supplier appraisal practices have significant influence on operational performance of service state corporations in Kenya. The study also found out that regulatory framework has a significant moderating effect on the relationship between public procurement implementation and operational performance of service state corporations in Kenya by 67.4%. The study recommends that in order to achieve performance, service state corporations should strengthen their internal ethical code of conduct to provide guidance to the agency values and cultural substance and set boundaries as to what is right and wrong in a given situation, to practice fair competition, maintain records in accordance with ISO 15489, continuously carry out supplier appraisal and strictly adhere to laid down procurement rules and regulations.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Public Procurement is a critical socio-economic function which is concerned with acquisition of goods works and services required by the government and other organs of the state (Siyal & Xin, 2019). Public Procurement process significantly influence the overall success of an economy depending on how it is managed (Khan, 2018). When appropriately adopted, the conceptions of Public procurement implementation such as ethical procurement practices, Tender Evaluation Process, procurement records management and supplier appraisal, will promote sound procurement through minimization of fraud, cost reduction, transparency and accountability and ensuring quality improvement on product and services of organizations (OECD, 2016, Pohja, 2021, Zhang, 2020, Khalili, Lin and Munawwar, 2017, Tumuhairwe & Ahmbisibwe, 2016, Jelagat and Bii, 2017).

In most economies, procurement represents a large proportion of public expenditure and can be regarded as a critical indicator of effectiveness of a government (Fourie *& Malan*, 2020). However, when rules governing procurement become compromised, service delivery would be hampered which would in effect jeopardize good governance as well as performance of procurement function (Komakech, 2016). The role of public procurement implementation is in ensuring that established procedures for ordering and approvals to goods, works and services for local, state and international purchasing are strictly adhered to (DelVecchio, 2019).

Lack of ethical procurement practices has led to many public institutions suffer from loss of funds through high level of fraud among procurement professionals (Sengbeh, 2015). According to Hoekman and Sanfilippo, (2018), in high income and low-income nations, procurement practice tends to be characterized by a strong `home bias` where most contracts, during the tendering stage, are awarded unfairly. As noted by Plebankiewicz and Kozic, (2017), one major challenge with tender evaluation process is that the public procurement law does not indicate the extent to

which the choice of the best offer is to be decided, whether on the basis of price or other criteria.

Another threat to most government programs and processes, including e-government and other service delivery activities, economic development initiatives, health care programmes, land reform initiatives, environmental projects, and initiatives designed to enhance citizen rights is poor records management (Lemieux, 2017). Often procurement files are incomplete, lost or destroyed so that crucial procurement information that can be used as evidence is not found. (Ivambi, 2016). According to Namukasa, (2017), despite provision of guidelines by the Public Procurement and Disposals Act, 2015 on how procurement records should be kept, there is poor management of records, leading to gross inefficiency and ineffectiveness on the side of public organizations.

The need to have a wider perspective and foresight into global procurement policies and to incorporate compliance into procurement function that seeks to promote flexibility, has made public procurement to be an agenda of the Supreme Audit Institutions which looks into important instruments and providing an oversight role (Lisboa, 2018). In many public organizations, in spite of abundance in human capacity and regulatory frameworks, corruption nexus in procurement is a major challenge for accelerated growth and development (Fagbadcho, 2019). Hence, monitoring and evaluation of government procurement is undertaken to minimize delays associated with delivery of goods, works and services and to obtain the best offer which gives the government the best value for money (Kembabazi & Mulyungi, 2018).

In most organizations, supplier selection processes are improperly executed in all areas of activity (Zarhaoui, *et al* 2022). Firms seeking to utilize supplier resources face several challenges, since these suppliers pursue their own self-interests, and their motives may change during the innovation process, as opportunities emerge or wane over time (Laursen and Anderson, 2022). According to Vourinen, (2022), periodic contracts reviews with the supplier is important for both the buying entity

and supplier as valuable information can be obtained about the operational side of the contract.

Regulatory Framework comprises of mandatory requirements set out in the Regulations, Policy, Directive and Procedure that govern the procurement of Goods, Works, both Non-Consulting and Consulting Services and specify the rules that must be followed. According to Matakala *et al* (2017), a strong regulatory framework is crucial to the efficient and effective running of any organization, sector or a function. This line of thought is supported by studies conducted by (Coviello, Guglielmo, and Spagnolo 2018; Bandiera et al. 2020) which states that, heavier regulation of procurement is associated with better outcomes in countries with lower-quality public sectors, and with worse outcomes in countries with higher-quality ones and as such. However, in many countries, procurement practice does not follow the requirements of the law, while in others, procurement entities go further than the requirements of the law, for instance with transparency (Bosio, et al, 2022). In Kenya, the level of public procurement regulation compliance among the state agencies is low to an extent that warrant speedy intervention (World Bank Report, 2017).

1.1.1 Global Perspective of Public Procurement Implementation

The global expenditure on procurement range between 18%-42% of world`s gross domestic product (OECD, 2016). This makes procurement become an integral part of any economy (Tukuta & Saruchera, 2015). However, procurement practices have not matched the expectation of stakeholders in terms of achieving value for money and budget execution (Komakech, 2016). According to Manu, (2021), the significant contribution that procurement function makes to organizational and national economies makes it imperative to put in place formal administrative and legal frameworks to ensure due process is followed in executing procurement policies.

Public procurement in Europe is mostly regulated by EU Directive 2014. In Norway for example, Public Procurement is subject to strict regulations ensuring fairness and predictability in procurement process (Benonisen & Strand, 2020). The United Kingdom (UK) which is a European Union leader in E-procurement with

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approximately 75% of the central government bodies carrying out procurement fully electronically, publishes 50% of the its contracts online with exception of the sensitive military contracts (European Commission, 2015). In Germany, with 35% of government spending and 15% of gross domestic product (EUR 500 per year), public procurement represents a large part of the German economy (OECD, 2019).

There is a special rule to the Finish procurement law that allows procurement without official processes from in-house units for Municipality (Pohja, 2021). This means that Municipality can make direct procurement from in house by organizing a formal competition even if the threshold value of purchase is higher than the threshold value. Public Procurement in India is quite complex given the federal framework for service delivery (Panya & Were, 2018). A Government of India, (2021) report revealed that the Public Procurement practice is engulfed by several challenges which include delay in eligible payment to contractors, leading to ineffective executing of projects and cost. The same scenario is replicated in Ukraine where the model of evaluation of tender offer is largely considered unsuccessful since the comparative method uses non-price criteria for the bids and does not allow the innovative suppliers to compete fairly (Baranovsky, Tkachenko & Glonti, 2020).

1.1.2 Regional Perspective of Public Procurement Implementation

The size of procurement as a share of Gross Domestic Product (GDP) varies in terms of purchases among the low income, middle income and high-income economies. In Africa, in spite of abundance in human capacity and regulatory frameworks, corruption nexus in procurement is a major challenge for accelerated growth and development (Fagbadcho, 2019). According to Pillay, (2021), efficient government procurement system is significant in cases where procurement accounts for large proportion of economic activity. Public procurement in South Africa accounts for approximately 20% of the country`s GDP (Fourie & Malan, 2020). Botswana, a middle-income country procures 28% of GDP with Angola and Eritrea at 26% and 33% while Kenya and Madagascar procures 26% and 5% respectively of goods works and services (Bosio & Djankov, 2020). With the above high magnitude, public procurement plays an important role in public sector policy hence the need to ensure

compliance in procurement process as a measure of good governance practice and efficiency (Knack, Biletska, & Kacker, 2017).

A report on West African contracting procurement environments, identified a number of commonly occurring challenges throughout the procurement cycle including; delay in budget preparation, informal tendering procedures**,** lack of access to contract information and delay in payment processing (Mandelbaum, 2017). In their evaluation of Ghana`s procurement law, Sokro and Agbola,(2021) noted that the greatest impediment to procurement efficiency is the culture of non-compliance with requisite statutory legislative framework. According to Notshulwana, (2021), when procurement process is compromised through corruption and non-compliance to procurement process, the quality of output would be suspect and the outcome would create poor service delivery

1.1.3 Local Perspective of Public Procurement Implementation

Public procurement has become a concern of public interest, and has been subjected to reforms, restructuring, and review to the existing rules and regulations (Okongo & Muturi 2017). Public Procurement and Asset Disposal Regulations, PPADR, (2020) defines procurement as the acquisition by purchase, rental, lease, hire purchase, license, tenancy, franchise or by any other contractual means of any type of works, assets, services or goods including livestock or any other combination including advisory, planning and processing in the supply chain system. The Public Procurement Reform in Kenya was jointly initiated in 1997 by the Kenya Government and the World Bank. The procurement audits carried out on public procurement system in Kenya disclosed serious shortcomings ranging from inefficiency to lack of sound and transparent legal framework (Ouko, 2015). This led the government to review and reform the existing procurement system with a view to enhancing efficiency, economy, confidentiality, accountability, transparency and compliance to public procurement.

The Public Procurement Reform undertaken by Kenya is home grown and has also borrowed good process from the rest of the World (Okere & Kinoti, 2018). The Government developed and put in place appropriate Public Procurement Regulations,

which were published as Legal Notice No. 51; The Exchequer and Audit (Public Procurement Regulations, 2001 dated 30th March, 2001 and the amendment of the same in 2002. To further streamline the legal framework and deepen the public procurement reforms, the Government drew and published Public Procurement and Disposal Bill, 2002, 2003, 2004 and 2005 and later published through Kenya gazette supplement, the Public Procurement and Disposals Act, 2015, Public Procurement and Asset Disposal Act Revised Edition 2016 and public procurement and asset disposal regulations (PPAD), 2020.

1.1.4 Service State Corporations in Kenya

The State Corporations Act chapter 446 of the Laws of Kenya defines a state corporation as a body corporate established by or under an Act of Parliament or other written law. Service State corporations are incorporated entities outside the mainstream civil service established for purposes of public service delivery (Muraya, 2016). These bodies are agencies of the Government established for specified purposes and for purposes of policy and regulation and shall also be known as State Agencies. They include; Executive Agencies, Independent Regulatory Agencies and Research Institutions, Public Universities, Tertiary Education and Training Institutions (Report of The Presidential Taskforce on Parastatals Reforms, (2013).

Executive Agencies and Independent Regulators are entities that are formed by the Government to undertake strategic Government function which may not be adequately delivered within the mainstream government structure. Such bodies may be able to levy service charge for the functions that they offer to the public. However, research has showed that in most cases, a number of entities in this category are not able to generate enough funding to run both their development and recurrent expenditures in a sustainable manner. For instance, a survey carried out by the State Corporations Advisory Committee between February, 2013 to June 2013 shows that 80% of the regulatory and executive agency bodies rely on the ex-chequer either fully or partially for funding of their development and recurrent expenditure.

Besides the Government funding, universities have started programmes which they run commercially to bridge the funding gap between what the Government and

mainstream students pay and the overall budgetary demand of the institution. According to Abdikadir, (2013), Performance of Government owned entities is constantly under public scrutiny, in part because much of the funding and equity in them flows directly from the tax base of the Country. This therefore means that these entities are accountable to the taxpayer through the taxpayer representative. According to Ongeti & Muchuki, (2018), Performance of Kenyan state corporations remains crucial for micro and macro-economic development of the country.

1.1.5 Operational Performance of Service State Corporations in Kenya

State-owned enterprises are established in most countries to accelerate economic and social development and their roles in national development can be analyzed under the concept of developmental state, through which countries add aggregate economic values to their goods and services via the industrialization process (IMF, 2020). In Kenya, these bodies are agencies of the Government established for specified purposes and for purposes of policy and regulation and shall be known as State Agencies (Awuondo et al, 2013). The state agencies, which includes (Executive agencies, Independent Regulatory Agencies and Research, Public Universities, Tertiary Education and Training Institutions) are incorporated by the Government to undertake a specific Government objective in delivering public service including regulation. The service state corporations are important instruments in improving the delivery of public services, including meeting the basic needs of citizens and also in enabling states to achieve the above goals, state corporations play a major role in enabling the social and economic transformation of the economies in which they operate. The Draft National Quality Policy, (2021), recognizes that the state agencies are critical element in promoting and sustaining economic development, as well as environmental and social well-being.

Executive agencies and independent regulatory authorities are entities that are formed by the government to undertake strategic government functions which may not be adequately delivered within the mainstream government structure. According to Kimia, (2019), the interest in the service sector is significant due to its policy direction mandate where many institutions help to shape policy direction in

education, security, public service transformation, level of service delivery, among others. Such bodies may be sable to levy service charges for functions that they offer to the public. However, research has showed that in most cases, a number of entities in this category are not able to generate enough funding to run both their development and recurrent expenditures in a sustainable manner. For instance, a survey carried out by the state corporation advisory committee in 2013 showed that 80% of the regulatory and executive agencies rely on the ex-chequer either fully or partially for funding of the their development and recurrent expenditure.

Governance in higher education involves the authority to make decisions about fundamental policies and practices in several critical areas concerning colleges and universities, (Sifuna, 1998). The ministry of Education which oversees the running of this institutions has placed tertiary colleges under the Technical and Vocational Educational Training Authority (TVET) while the Public Universities are under the management of Commission for University Education (CUE). The role of the universities in actualizing the nation's development blue print has over the years been emphasized in several policy documents among them the Ominde Report (1964); Gachathi Report (1976); Mackay Report (1982); Kamunge Report (1988); Sessional Paper No. 1 of 2005; Kinyanjui Report (2006); Sessional Paper No. 10 of 2012; as well as Kenya Vision 2030 which is the country's new development blueprint covering the period 2008 to 2030.

Consequently, the enactment of the 2010 constitution of Kenya had major implications on university education and particularly the enactment of the Education Act No. 42 of 2012. The act authorizes the Commission for University Education (CUE) to grant universities authority to operate as a way of harmonizing supervision, external quality assurance, setting standards for operation and monitoring performance (Orwa & Otieno 2019). Another key function of the Commission is to accredit and inspect programmes offered by universities to ensure relevance and compliance with the stipulated guidelines for development of a university programme (CUE, 2018). In 2013, Technical and Vocational Educational Training Authority was enacted by is an parliament to perform several functions. This functions includes; to provide for establishment of a technical and vocational

education and training system, to provide for governance and management of institutions offering technical and vocational education and training, to provide coordinated assessment of, examination and certification and to ensure standards, quality and relevance and for connected purposes (TVETA, 2013)

Challenges to the operational performance of service state corporations in Kenya have been documented in various reports. According 2022/2023 audit report, many service state corporations were found to be non-compliant with the law on effective use of public resources, where there are unapproved excess board expenditures exceeding the approved expenditure capping by higher percentages. A report published by the World Bank (2017) indicates that in Kenya, only about 13% of all procurement practices fully comply with procurement regulations, leading to a total loss of $1.2 million per year based on non-compliance alone. A report on the evaluation of state corporations and tertiary institutions for the financial year 2020/2021 revealed that none of the tertiary institutions achieved excellent performance with only 21.4% achieving very good performance. Finally, inadequate performance management framework that effectively links performance of service state corporations to national development goals has led to low level performance of these state agencies resulting to customer dissatisfaction, complaints and service delivery civil protests.

1.2 Statement of the Problem

Over time assessment of trends in operational performance of service state corporations in Kenya, unveils underlying challenges in in governance, financial management and in the implementation of public procurement (Auditor General reports, 2020-2023). Public procurement in Kenya account for approximately 26% of the country`s Gross Domestic Product (GDP) (Bosio & Djankov, 2020). However, despite its significance to the economy, the level of compliance to public procurement practice continue to be low (Mutangili, 2021). A Compendium Report on Collaborative Procurement audit undertaken in Selected Caribbean Countries indicate that non-compliance and partial compliance to procurement practice was recorded at an average of 92.5% across the procurement process, with non-

compliance to procurement practice as a single metric reaching as high as 87.5% during the Contract Finalization phase (CAROSAI, 2020). The same scenario is replicated in Kenya and other developing countries where only 15% of procurement process are a success while 85% of public procurement process are failures due to lack of compliance to procurement practices (Mesa, Kwasira & Waweru, 2017). A study by Baiden, (2020) posits that, despite the importance ethical practices in public procurement, a culture of non-compliance combined with lack transparency and accountability have led to financial loss and poor service delivery. Hoekman and Sanfilippo, (2018), found that, in high income and low-income nations, procurement practice tends to be characterized by a strong `home bias` where most contracts are awarded unfairly.

World Bank report (2018) established that, on average, due to lack of synchronized procurement planning and budget execution, expenditure out turns in the state agencies underperformed its allocated budget by 27%. The Institute of Economic Affairs report, (IEA, 2018) revealed serious violation of procurement practices in the public sector, where, 63% of the cases of procurement violation which happens at the Post tender award stage and are mostly related to poor contract management, while, 12% of violation happens at the Pre-tendering stage, and are due to informal agreements on contracts and abuse of non-competitive procedures on the basis of legal exceptions, contract splitting, abuse of extreme urgency and non-supported modification. The Global Economic Crime and fraud survey report indicated a 34% incidence rate in procurement fraud in Kenya, making it the highest procurement crime in East Africa (Price Water Coopers, PWC, 2018). National audit report of 2020/2021 financial year cited delay in implementation of audit recommendations on public procurement as major setbacks facing the public sector institutions including Service State Corporations in Kenya (Gathungu, 2021). According to Abere and Muturi, (2015), failure to comply with the procurement regulations can lead to unbiased decision making in procurement. The above statistics clearly indicate that there is a performance gap on Public procurement implementation. This study therefore sought to create new knowledge to bridge the existing gap on influence of Public procurement implementation on operational performance service state corporations in Kenya.

1.3 Research Objectives

1.3.1 General Objective

The main objective of the study was to assess influence of Public procurement implementation on operational performance of service state corporations in Kenya.

1.3.2 Specific Objectives

1. To determine the influence of ethical procurement practices on operational performance of service state corporations in Kenya
2. To examine the influence of Tender Evaluation Process on operational performance of service state corporations in Kenya
3. To establish influence of Procurement records management on operational performance of service state corporations in Kenya
4. To evaluate the influence of supplier appraisal practices on operational performance of service state corporations in Kenya
5. To establish the moderating effect of Regulatory framework on the relationship between public procurement implementation and operational performance of service state corporations in Kenya

1.4 Research Hypothesis

H_{01}:   Ethical procurement practices does not significantly influence Operational performance of service state corporations in Kenya

H_{02}:   Tender Evaluation Process does not significantly influence Operational performance of service state corporations in Kenya

H_{03}:   Procurement records management procurement Process does not significantly influence Operational performance of service state corporations in Kenya

H_{04}:   Supplier appraisal practices does not significantly influence Operational performance of service state corporations in Kenya

H₀₅ Regulatory Framework does not have a moderating effect on the relationship between public procurement implementation and operational performance of service state corporations in Kenya.

1.5 Significance of the Study

The study was important as it sought to shed light on the relationship between public procurement implementation and operational performance of Service State Corporation in Kenya. The research output is of great use to the following public institutions below;

1.5.1 Government

The government can use the study to enhance accountability and transparency, to encouraging improvement in the appropriate use of public funds, at reinforcing the effectiveness of management and oversight bodies and at inducing change in public procurement process in order to achieve value for money, realize quality goods and services and to reduce pressure on public budgets.

1.5.2 Stakeholders

The research creates awareness to stakeholders in procurement and supply chain management on the requirement of proper code of conduct and principles of procurement that promotes fair competition, equity and reduction of fraudulent activities in the purchasing function

1.5.3 Management of Service State Corporation in Kenya

This study findings provides the management of Service State Corporations in Kenya with valuable source of knowledge in harmonizing their operations to ensure performance through sound procurement, cost reduction, transparency and accountability and quality improvement.

1.5.4 Procurement Function

Through this study, Procurement Practitioners are able to identify weaknesses in the current public procurement practice and find ways in mitigating integrity risks which are predominant along the procurement cycle.

1.5.5 Researchers

Researchers would benefit from the findings of this study as it would provide them with more information for future research and pave way for efficient public procurement implementation. The study findings would assist researchers in gaining new knowledge in public procurement implementation that will be significant in contributing to the performance of public sector organizations. This study also avails data for researchers to be able to decide whether employing one of the more procurement practices would help achieve the desired operational performance.

1.6 Scope of the Study

This study was carried out in service state corporations in Kenya. As derived from the Kenya National Bureau of statistics, there are 132 service state corporations in Kenya. The study purposefully focused on the top management of service state corporations in Kenya to give more insight into the study. These managers included; Audit managers, ICT Manager and Procurement manager respectively. The study used survey to collect data from the respondents. Data was collected through the administration of questionnaires to Audit, ICT and Procurement managers of the service state corporations in Kenya. The choice of service state corporations in Kenya was due to the nature of operations of these agencies. The service state corporations are important instruments in improving the delivery of public services, including meeting the basic needs of citizens and in enabling states to achieve social and economic transformation of the economy. The study was established on the following independent variables; ethical procurement practices, tender evaluation process, procurement records management, supplier appraisal practices and regulatory framework and their influence on operational performance of service state corporations in Kenya

1.7 Limitation of the Study

This study was subject to various limitations including the fact that public procurement implementation is an area of concern in public institutions in Kenya. For this reason, some respondents were not cooperative during the study. Some of the agencies under study were not willing to reveal some information in fear of confidentiality. To mitigate against this, the researcher assured the respondents that the information gathered would only be used for academic purposes. This was done through the introduction letter from the researcher together with the letter from the University and a permit from NACOSTI, which indicated that the data sought in the survey was strictly for academic purposes, and would be treated with utmost confidentiality.

The study targeted mainly top management of the service state cooperations in Kenya. Securing valuable time for these respondents was an uphill task since they are involved in major operations of their respective functions. To alleviate this, the researcher allowed the respondents adequate time to respond to the questionnaires, sensitized the respective managers on the benefits and significance of the study and ensured that follow ups were made. The study examined public procurement implementation and operational performance of service state corporations in Kenya, where the outcome of the study would enable the management of service state-corporation in Kenya to harmonizing their operations in ensuring performance through sound procurement.

The study was carried out during the time that the country was facing an outbreak of covid-19. During this period, many respondents were not readily available in their offices. This was addressed by booking appointments with the respective respondents in order to administer the questionnaires. Reminder through follow up calls were made to encourage completion, return of the questionnaires and to clarify any questions that had potentially risen.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the relevant theoretical and empirical literatures. It comprises of the conceptual framework, review of variables, critique of study literature, summary and research gaps. As noted by Moser and Korstjens, (2018), Literature review should be extensive and thorough because it aims at obtaining knowledge of the topic being studied.

2.2 Theoretical Review

Theory is a set of interrelated concepts that present a systematic view of phenomena in relation to the variables, while a framework is the essential set of ideas which provides the structure that is to be fully developed at a subsequent stage (Chukwudi, 2019). Hence, theoretical framework is the collection of interrelated concepts which guides research to determine what to measure, and what statistical relationships to look for (Esper, *et al*, 2010). According to (Braidotti, 2018), theoretical framework introduces and describes the theory that explains why the research problem under study exists. This study is guided by, Deontological Theory of Ethics (Kant, 1781), Transaction Cost Theory (Williamson 1979), Records Continuum Model (Upward, 1990), Stakeholder Theory (Freeman, 1984) together with theory of regulatory compliance and theory of performance respectively.

2.2.1 Deontological Theory of Ethics

Deontological theory of ethics places special emphasis on the relationship between duty and the morality of human actions. It was first developed in 18th century by Immanuel Kant, who argued that although the consequences of an act is good, some acts are always wrong, and that actions are judged as ethical or unethical based on duty or the intentions of an actor. Several researchers have discussed deontological theory of ethics in different ways to justify the use of ethics in business transactions and mores so in the procurement process. According to VanMeter *et al* (2013),

deontological class of ethical theory enables practitioners to adhere to their obligations and duties when engaged in decision making when ethics are in play. This means that a person will follow his or her obligations to an entity because upholding one's duty is what is considered ethically correct. The morality of an action is based solely on the nature of the action regardless of consequences or any other function (Santoni de Sio, 2021)

Moral philosophy of Immanuel Kant Theory on deontology is based on three imperatives which includes: To Act only on the maxim by which an individual's action can at the same time become a universal law. "The second imperative dictates that human beings should be treated not simply as a means to one's own ends but also as ends in themselves. The third Kantian rule requires that one should act as if he were a member of an ideal "kingdom of ends," in which he is both king and sovereign at the same time. In this case, organization rules that are used by management must be such that can be endorsed by every member in that organization (Pasternak, 2012). Therefore, a person has a moral obligation to others and once he fulfill those obligations, he will be acting ethically, if he does not, then he will be unethical (Baines & Taylor, 2012).

Unlike Utilitarian ethical theory, deontological theory contains positive attributes since it produces very consistent decisions which are based on the individual's set duties. Deontelogical theory can be described in terms of consequentialism, where morally right choices are those that increase either directly or indirectly the good (Alexander & Moore, 2016). Ethical decision making based on the principles of consequences is mostly desired since the principal focuses on the actual outcome of decisions. However, according to Watts, (2020), this principle of consequentialism can be used to justify a wide range of decisions which violates other more basic principles in the interest of `greater good`. The principles of Deontological Theory of Ethics can then be used to intuitively identify scenarios that are immoral (Biagetti et *al*, 2020).

In procurement, morality arises out of the hypothetical contractual bargaining that procurement staff engages with the suppliers, governed by the norms of rationality.

Deontological theory and theory of Justice represent similar thought on equality and favoritism. Justice theory approach to ethics has its roots in the teachings of the ancient Greek philosopher Aristotle, who said that "equals should be treated equally and unequal unequally (Naagarazan, 2006). The basic moral question in this approach is: How fair is an action? Does it treat everyone in the same way, or does it show favoritism and discrimination. According to Bowie, (2007), Moral questions in Deontology theory of ethics includes: Is the principle based on good will? Does it treat people as ends in themselves? And can it be willed universally without contradictions.

The relevance of deontological theory of Ethics to Ethical procurement practices is in the core principles that it upholds which includes the norms, values and behaviors that is expected of the practitioners while conducting procurement activities. Since Deontological Theory of Ethics majorly focuses on the Ethical values, the study discussed other theories (transactional theory, record continuum model and stakeholder theory) to add value to the other study variables respectively.

2.2.2 Transaction Cost Theory

Transaction cost theory lie at the heart of cost reduction activities and have been invoked as a fundamental element of operations and supply chain management research. The concept of transaction-cost was first initiated by Coase (1937) where he created the basis of what became transaction-cost economics theory. According to Coase, (1937), under certain conditions, the costs of conducting economic exchange in a market may exceed the costs of organizing the exchange within a firm. In this context, as explained by Rindfleisch and Heide (1997), transaction costs are costs of running an organization`s system and include costs related to developing and negotiating a contract and monitoring the agreements to its conclusion.

Transaction cost Theory was clearly elaborated by Williamson (1979) who documented that the idea of transaction cost economics can be used in businesses to reduce the total costs associated with performing transactions through choosing the most economical governance structure, hierarchy or market. Economists have classified procurement transactions within organizations as those that support

coordination between buyers, that is, market transactions, and those supporting coordination within the firm. This will enable firms to make decisions based on the most cost-effective option (Htay, Abedeen & Salman, 2013).

Williamson, who was recognized with a Nobel Prize for his work on transaction costs, theorized that whether activities would be internalized within a firm depended on their transaction costs (Greve & Argote, 2015). He argued that there are three characteristics of transaction costs; (specificity, uncertainty and transaction frequency) under which carrying out transaction becomes costly. The high costs associated with these characteristics make the hierarchical governance more efficient than market governance (Geyskens & Steenkamp, 2011). The importance of transaction cost theory is further emphasized by (Dąbrowska, 2016) who acknowledged that, without the concept of transaction costs, it becomes impossible to understand the working of an economic system.

Asset specificity is one of the most crucial dimensions of transaction cost theory. Asset specificity or relationship-specific investment can also be defined in terms of the uniqueness of assets to certain activities that have a higher significant value within a particular transaction relationship than outside the relationship (De Vita *et al.*, 2011). Where firms find it convenient to unilaterally invest in high levels of assets which is dedicated to a specific transaction, their utility and value are tied to the relationship continuation (Delbufalo, 2021)

Uncertainty in procurement can be equated to inability to perform an accurate forecast. Geyskens, Steenkamp and Kumar, (2006) state that Uncertainty can be categorized in three perspectives, that is, technological uncertainty which is the inability to forecast technical requirements for an organization; volume uncertainty which is the inability to forecast quantities while volume uncertainty is where an organization finds it difficult to ascertain whether both parties will comply to agreements.

Packard, Clark and Klein (2017), noted that uncertainty is taken as an environmental characteristic where investigations rely on intervening effects on decision making, organizational choices and firm performance. In this regard, managers need to make

decisions that having in mind that the decisions can affect the market positively. The third dimension of characterizing a transaction is frequency where transactions with high frequency need to be performed internally under a hierarchical governance structure to reduce the costs associated with the large number of transactions (Williamson 1985). When organizations comply with public procurement law and trnasact procurement in a more efficient, effective and transparent manner, achievement of their goals is realized at a lower cost (Douma & Schreuder, 2012).

According to Hautsch and Voigt, (2019), transaction cost theory help firms to utilize well its resources. This line of thought is supported by to Addae, Wen and Brew, (2015), who posits that firms that manage supply chain activities efficiently, minimizes their transaction costs and production costs to achieve their objectives. According to McManus (2019), the central premise of transaction cost economics is that parties select governance mechanisms to mitigate the hazards of opportunism while economizing on the costs of more complex forms of governance.

2.2.3 Record Continuum Model

The Record continuum model was developed in 1990 by Frank Upward together with other Australian theoreticians such as Peter Scott, and Jay Atherton, at Monash University in Australia (Karabinos, 2015). The aim of the model is to support archivists in their concern with the relationship between recordkeeping and accountability Millar, (2017). According to (Syard, 2014) Record Continuum Model is most preferred as an instrument of analysis since it promotes the integration of records in a manner that fits the modern organization and also facilitates re-use of information in different contexts and by different stakeholders which the e-government is all about.

Figure 2.1 demonstrates the continuum model in four dimensions, where in each stage, the records undergoes a recurring and reverberating activities that fall both within archives and records management (Upward, 2005).
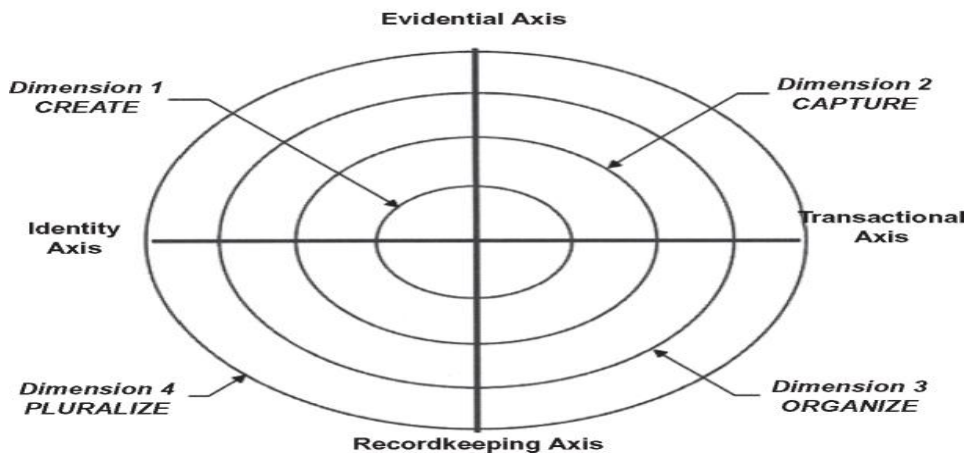
Figure 2.1: Record Continuum Model

Source: Frank Upward 2005

The stages include; Create, capture, organize, and pluralize. Create dimension represents the locus where all business actions take place and documents exist in versions and can be moved beyond this locus. Dimension 2-Capture, is when a document is communicated or connected through relationships with other documents, with sequences of action and records are captured as evidence of transactions and can be distributed, accessed and understood by others involved in the business transactions. Dimesion 3-Organize, represents an aggregation of records above individual instances of sequences of actions. In this dimension, records are invested with explicit elements needed to ensure that they are available over time that exceeds the immediate environments of action. Lastly, Pluralize which is Dimesion 4 represents the broader social environment in which records operate. The legal and regulatory environment which translates social requirements, different for every society and at every period, for records management (Oberg & Borglund, (2006).

Records are created to meet societal expectations and are captured, managed, accessed, shared and used in ways that meet those expectations (Hessami, 2020). The Record Continuum Model is well applicable in Procurement since it supports the use of information systems as a method of record management. The International Records Management Standard (15489-12016) notes that the records continuum model was a response to the more complex digital development of records and

archives and influenced by post-modern thinking (Matlala & Maphoto, 2020). This will enable auditors to carry out audit trails where transactions have been made through electronic fund transfers such as the Integrated Financial Management Information System (IFMIS). The processes that take place in the fourth dimension enable records to be reviewed, accessed and analyzed beyond an organization for multiple external accountability (McKemmish et al. 2010). It is essential for electronic records to be identified and managed in a manner that will make them accessible for as long as they are of value (Upward, 2009).

Records Continuum Model is seen by (Svard, 2014) as a more progressive model that facilitates a proactive and holistic approach to the management of digital information. According McKemmish (2017) records continuum model is widely used as a teaching tool and an implementation model, as indicated by its use in developing standards between metadata and entities, as well as designing systems and programmes for recordkeeping and appraisal. The final argument for the Record Continuum Model is that the model has been used as a way of merging the processes of transactions and documentation, and as a tool through which focus can be placed on the context of the documentation process (Klareld (2018).

2.2.4 Stakeholder Theory

Stakeholder theory is one of the various approaches that try to explain or rationalize strategy of organizations (Pagell, 2010). Originally developed by Freeman (1984) as a managerial instrument, stakeholder theory has since evolved into a theory of the firm with high explanatory potential which focuses explicitly on an equilibrium of stakeholder interests as the main determinant of corporate policy. It has its main underpinning on the emphasis placed on the role of stakeholders of a firm in the pursuit of its objectives. Lawal (2016) define stakeholders as individuals or organizations with legitimate interest or stake in an organization, process, project or decision. Since Organizations at times find it difficult to operate as a single entity, they will seek to increase the competitiveness of their operations by working closely and building relationships with key stakeholders (Chen, *et al*, 2007).

According to Spekman, et al, (1998), stakeholder theory can be explained in terms of co-operation, coordination and collaboration. The study documented that in corporation, organizations exchange important information and engage stakeholders in long-term contracts. On the other hand, coordination is a term that has been used in literature to describe supply chain relationships that have relatively little interdependency. Whereas in collaboration, businesses work on ensuring a seamless flow of information and resources and represents the next level of interaction intensity among supply chain members. This line of thought is supported by Jarvis *et al,* (2013) which explained that the use of cooperation ensures lack of domination of one team on the resolution, but a result of a collaborative approach between all individuals, groups or organizations, and here appears the need for cooperation and coordination and good communication. This can well be explained in figure 2.2.

Co-operation Long-term relationship between trading partners	↔	**Co-ordination** Organization Interdependency	↔	**Collaboration** Continuous flow of information

Figure 2.2: Dimensions of Stakeholder Theory

Source: Adopted from Freeman, 1984

According to Vishwanathan and Bridoux, (2020), stakeholder theory is concerned with value creation and provides an avenue for examining the relationship and how its distribution influences value creation. If organizations are in dare need of long-term success; there should be a dynamic relationship between the buyer and supplier in terms of resource allocation and commitment to contract terms (Simon 2016).

A study conducted by Awino and Getuno (2014) states that, unlike Agency theory where managers are working and serving for the stakeholders, in stakeholder theory, managers in organizations have a network of relationships to serve the suppliers, employees and business partners. The motivation of stakeholders in a business management setting reflects current interest in managing the issue of compliance with the set quality standards and in inter-organizational relationships, where the

firm is generally considered as unsatisfactory unit of analysis and it is necessary to take a whole system, sector based or industry view (Walker and Brammer 2009; Pagell, 2010). The stakeholder theory can therefore be used to establish how internal stakeholders, external and connected stakeholders influences the general implementation of general public procurement and how it affects the performance of purchasing function.

2.2.5 Theory of Regulatory Compliance

The Theory of Regulatory Compliance was first proposed in the 1970's when the relationship between compliance with rules was compared to compliance with best practice standards and outcome data (Fiene, 2016). The theory of Regulatory Compliance deals with the importance and significance of complying with rules or regulations and has implications for all rule, regulatory, and standards development throughout human service and economic domains. According to Drahos, (2017), Regulatory theory assumes that governments' intervention and interaction improve the structure, conduct, processes and other affairs of the corporate entities. The Theory further emphasis on selecting the right procedures, regulations, systems or policies rather than having more or less one that bring significant predictive of positive outcomes, whereby compliance with said rules, regulations, system or procedures is a key success factor.

Researchers have stressed on the difference between legal and regulatory systems as developed by business and corporative organizations, and how this would affect administrations and governments. Den Hertog (2000) argues that "in the legal and economic literature, there is no fixed definition of regulation", and that, regulation is "the employment of legal instruments for the implementation of social-economic policy objectives", pointing out that "a characteristic of the legal instrument is that individuals or organizations can be compelled by the government to comply with prescribed behavior under penalty of sanctions". According to Rahman et al,(2021), regulatory theory assumes that governments' intervention and interaction improve the structure, conduct, processes and other affairs of the corporate entities, and that, awareness and education of the targeted population play an imperative role in

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increasing the level of compliance to voluntary regulations and other good or desired corporate practices. Fiene (2016) posits that the theory of Regulatory Compliance deals with selecting the "right" rules and standards that have predictive validity and do no harm. It acknowledges that all rules and standards are not created equal and have a differential impact in a monitoring or licensing system.

Regulation is associated with the activity of public independent regulatory agencies, designed to promote economic, social, risk-management, integrity, or moral goals (Faur *et al,* 2021). Since the 1990s, more and more states worldwide are establishing such agencies and placing more emphasis on the use of authority, rules, and standard-setting, thus partially displacing earlier emphasis on public ownerships and directly provided services. A literature review by Sanz et al (2011) suggests that the more the separation between policymaking and economic regulation, the higher the incorporation of regulatory governance principles such as transparency, accountability and participation. According to Rahman *et al* (2021), in order to ensure compliance to procurement regulations, awareness and education of the targeted population play an imperative role in increasing the level of compliance to voluntary regulations and other good or desired corporate practices. This corresponds with (Kirkpatrick, 2014, Mishra and Kumar, 2021) which documents that, to enable institutions to function more efficiently, effective regulatory reforms should provide a supportive environment for increased investment, private sector growth, market-led economic growth, and should be more formalized, expert-driven, transparent, independent, and pervasive across countries and sectors.

Compliance with regulations involves opportunity costs in that the resources expended for compliance are not available for other productive, welfare enhancing activities (Boettke & Coyne, 2009). According to Cordes *et al* (2022), providing flexibility in compliance with regulatory goals can yield significant benefits by lowering costs to businesses and by providing incentives for innovation in achieving those goals which an lower consumer prices, increase opportunities and improve productivity. However, regulations should be designed and implemented in such a way that the economic burdens of complying with a given regulatory objective is minimized (OECD, 2020b).

2.2.6 Theory of Performance

Performance theory traces its origin in a variety of fields and later became an area of interest for many scholars in the late 1970s (Shephered, 2006). Theory of performance is one of the most critical constructs in management research that provides a framework to explain performance and performance improvements in both traditional learning contexts as well as non-traditional settings like advising, departments, and organizations (Elger, 2015). For this study, the theory of performance is considered relevant in understanding the influence of public procurement implementation on operational performance and consequently providing the theoretical background. According to Pacific Crest, (2009), one of the key contributing factors of performance theory is that, with the exception of fixed factors, any of the components of performance may be targeted and improved in order to improve overall performance.

Studies in performance measurement have often focused on procedures and tools that could improve the efficiency and the effectiveness of organizations (Franco-Santos et al., 2007, Kaplan and Norton, 1992). Locke and Latham (2004) found a positive, linear function in that, the most difficult goals produced the highest levels of effort and performance. They also found that performance decreased once the limits of ability were reached or when commitment to a highly difficult goal lapsed. The theory of performance require organizations to 'perform' and to communicate their achievements to key stakeholders (Micheli & Mari, 2014). As a consequence, organizational functions and processes are increasingly demanded to demonstrate their contribution to performance. This is in line with the practice of public procurement which advocate for providing an adequate degree of transparency throughout the entire public procurement cycle to minimize the risk of fraud, corruption and mismanagement of public funds.

According to Kakwezi and Nyeko, (2010), until an organization measures purchasing performance, they will never know how well they are performing. Bourne, (2005) organizes factors that influence Performance measurement systems implementation into three main categories which can be further divided into a wide covering of the business management system,

or a more narrow focus on measurement system improvements. The categories include; purpose, structure and culture. Similarly, in this study, public procurement implementation have divides its variables into several categories (ethical procurement practices, tender evaluation process, procurement records management and supplier appraisal) in order to influence operational performance in terms of cost reduction and quality improvements. Amaratunga & Baldry (2002) suggest that performance is a key driver to improving quality of services while its absence or use of inappropriate means can act as a barrier to change and may lead to deterioration of the purchasing function

2.3 Conceptual Framework

Conceptual framework offers a logical structure of connected concepts that help provide a picture or visual display of how ideas in a study relate to one another (Grant & Osanloo, 2014). A manipulated variable which in some instance could be more than one in number is referred to as independent variable while the variable which is expected to be affected by the manipulation is called dependent variable (Oyebanji, 2017). The independent variables in this study are adopted from past studies and includes; ethical procurement practices, Tender Evaluation Process, Procurement records management and supplier appraisal practices.

A moderating variable is a variable that affects the relationship between two other variable (Adom *et al*, 2018). As indicated in Figure 2.3, the moderating variable in the study is regulatory framework. Moderating variable indicators includes; audit standards, procurement law and budgetary control. Dependent variable is what is measured in the experiment and what is affected during the experiment. The dependent variable responds to the independent variables. Dependent variable in this study is Operational performance of service state corporations in Kenya.

Ethical procurement practices *Integrity* *Confidentiality* *Fair competition*		
Tender Evaluation Process • *Tender Opening* • *Comparative Analysis* • *Tender Award*	→	**Operational performance of service state corporations in Kenya** • *Fraud levels* • *Operation costs* • *Transparency & accountability*
Procurement records management • *Records creation* • *Records maintenance & Encryption* • *Records access and use*		**Dependent Variable**
Supplier appraisal practices • *Due Diligence* • *Supplier commitment* • *Communication*		**Regulatory Framework** • *Audit standards* • *Procurement Law* • *Budget Control*

Independent Variables   **Moderating Variable**

Figure 2:3: Conceptual Framework

2.3.1 Ethical Procurement Practices

Purchasing ethics are moral principles and values that guide officials in all aspects of their work thus avoiding conflicts of interest, and not making improper use of an individual's position (Kruger, 2014). Challenges in public procurement are not only limited to transparency and accountability but stem from weak codes of conduct and unethical process among employees (Nyadenje *et al*, 2012, Ayoyi & Musyoka, 2015, Baiden, 2020). The use of code of ethics provides all those involved in procurement processes with clear statement of mutual expectation to ensure a common basic

understanding by setting boundaries as to what constitute ethical behavior as determined by organizational values as well as other policy requirements relating to public procurement (OECD, 2016). Ethical procurement practices was discussed based on integrity, confidentiality and fair competition.

As an indicator of ethical practice, Integrity is the quality of acting in accordance with relevant moral values, norms and rules (Huberts, 2018). Integrity in the context of public procurement implies that procurement procedures observe four principles of transparency, good management, the prevention of misconduct as well as accountability and control (Transparency International, 2012). This means that integrity relates to virtues and where necessary defines the relationship between what is right and wrong, good or bad (Becker & Talsma, 2016). Where bad performance is identified, especially where it concerns conduct that violates minimum standards, this should be addressed as a priority (CIPS, 2013)

Confidential information is a secret that has been shared or entrusted under the condition of non-disclosure to a third party. The general confidentiality provisions provide for understanding on how both parties to a contract will manage information (The State of Queensland, 2018). Access to confidential information must meet ethical guidelines, contractual obligations, and government regulations (Gad *et al* 2019). In public procurement, the aim of confidentiality is to promote limited disclosure and to restrict access of information from unauthorized users (Public Procurement and Asset Disposal Act, PPADA, 2015). Consequently, information that may be considered confidential include: Pricing, Terms and conditions of Contract, Bids and quotations, cost of products, Service level agreements, Descriptions of formulas and processes, Designs and drawings, Organizational plans, goals, and strategies, Financial information not available from public sources, Personal information about employees, source of supply and computer software programs

As an ethical practice in procurement, confidentiality can be enhanced through professionalism. According, (Mrope, 2017), Professionalism does not only relate to level of education and qualification of the workforce, but also include the

professional approach in the conduct of procurement activities. In order to ensure public accountability and minimization of fraud, there is need for development of professional standards among the personnel's responsible for procurement management and asset disposal (Kalinzi, 2014). Within a government framework, Procurement professionals develop and implement strategies, tools and systems that deliver high quality, best practice in terms of decision making and in compliance to set standards (Institution of Public Administration Australia, IPAA, 2014).

One serious challenge on the performance of public procurement is promoting fair competition among bidders (Anderson et al, 2016). The term `fair` is used to describe competition that offer equal opportunity to insiders and outsiders (Jokovic, 2019). On the other hand, the term `competition` is a powerful tool which ensures that minimal resources are used appropriately (World Bank Group 2019). The public procurement and Asset Disposal Regulation, 2020 advocates for fair competition through selection of appropriate procurement methods, being open and unambiguous about the evaluation criteria set out in in bidding documents and in avoidance of deliberate use of fake competition. This is supported by Virginia Information Technology Agency (VITA, 2018) which states that purchasing firms should attempt to understand marketplace to identify and promote involvement of eligible bidders to ensure competition.

2.3.2 Tender Evaluation Process

Tender Evaluation Process is carried out in public procurement to select the best offer from the respective bids (Kozik, 2019). The Public Procurement and Asset Disposal Regulation, PPADR, (2020) document that the evaluation process shall include comparing each tender to the technical requirements of goods, works or services in the tender document. According to World Bank, (2016), to realize cost reduction, the evaluation criteria may take into account such factors as the evaluation of cost using a method that is appropriate to the nature of the procurement including the proposed price or the lifecycle costing. Tender Evaluation Process includes three main categories; preliminary stage, Comparative analysis (technical and financial evaluation) and contract award as shown in figure 2.4
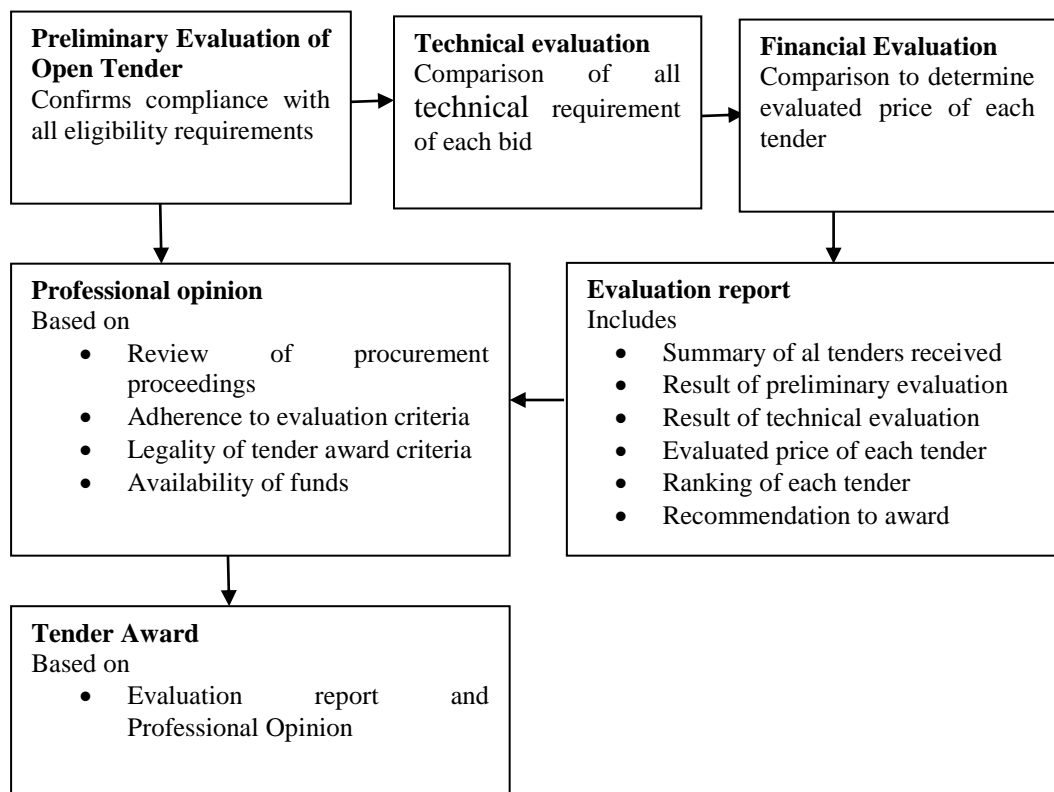
Figure 2.4: Tender Evaluation Process

Source: Adopted from PPADR, 2020

In many organizations, a common problem in tender evaluations is the bidding system's inability to provide a complete database of contractors with their personnel, past works and performance matrix (Kusumarukmi & Adi, 2019). The preliminary evaluation of the Tender Evaluation Process is basically to confirm compliance with all the eligibility requirements as provided for under section 55 of the Public Procurement 2020 Act. The public procurement act provide for tenders to be opened and a List of all suppliers who submitted bids before the closing deadline to be developed with time and date stamped. Any tender received by the procuring entity after the deadline for submission of tenders shall be declared late, rejected and returned unopened to the tenderer, PPADR, 2020

Technical evaluation is one of the most important stages of the tendering process because it ensures that the contract award decision is objective and uses the disclosed criteria (Eshitoli, 2016). Section 122(2a) of the PPADR, 2020 requires for the

technical evaluation to be conducted against a set criterion on a merit point system to determine the total technical score for the technical bids received. Technical evaluation process signals that a firm process fair competition by giving equal opportunity to all bidders. As noted by Komakech, (2016), competitive procedures should be a formal standard for conducting procurement as the basis for driving efficiency, eliminating fraud and ensuring competitive outcomes.

Financial evaluation of proposals involves comparing the eligible offers with the financial, commercial and resource requirements stipulated in the solicitation document (UNAIDS, 2015). According to World Bank, (2016), the financial evaluation is undertaken to identify the best offer taking into account lifecycle costing which is the optimal combination of total cost of ownership and quality to meet buyer's requirement. In addition to the tender price quoted, the evaluation committee may require the consideration of other factors which are related to the characteristics, performance and terms and conditions of the goods to be purchased and related services are also considered during (Public Procurement and Regulatory Authority, (PPRA), 2021)

Before the release of the award contract, an evaluation report containing; description of the contract, type of tender, closing date of tender, details of tender received, technical compliance of tender analysis of three lowest tenders, performance records of three lowest tenders and recommendation of assessment panel, is generated for the purposes for office records or for future reference (Kashyap, 2016). The award of the contract should consider the best value for money (EU-Directive, 2014). This means that the award should not be entirely based on the lowest price but also consider better quality of goods, works and services (Nzenge *et al*, 2018).

2.3.3 Procurement Records Management

Records management is an important support tool that enables institutions to comply with the internal statutes of a firm and the governments legal requirements (Tumuhairwe & Ahmbisibwe, 2016). Procurement records management is the efficient and systematic control of the creation, receipt, maintenance, use and disposal of all documents, files, invoices etc. relating to the organization's activities

(Mosweu & Rakemane, 2020). As noted by Namukasa, (2017), Procurement records are the basis for internal and external audits and are needed to determine compliance with the procurement legal and institutional framework. This therefore calls for quality record management in accordance with procedure and guidelines that address accountability, responsibility and authority.

The public sector reforms introduced in many African countries including Kenya has consistently emphasized the need for proper records management (Mohammed *et al*, 2018). Procurement records include documents relevant to the procurement process from pre-tendering stage, tendering stage and the post tendering stage (Hashim, 2016). Along the procurement cycle, transaction activities must be capable of being traced from initiation of stage, through all the intermediate processing steps, to the resulting payment stage (Boakye & Etse, 2014). According to (Lemieux, 2017), Poor records management threatens all government programs and processes, including e-government and other service delivery activities. The role of procuring entity is to develop the filing system and maintain a complete record on the entire procurement and contract administration process for each requirement (Afifah, 2018).

Data ethics is a horizontal theme that applies to all components of trustworthy, transparency and forceability in regard to ethical implications of data processing (Mooradian, 2018). In order to facilitate the storage of information and data, most government agencies classify, stores and manages data through a database (Wu & Chen, 2016). Data encryption is one of way to enhance the confidentiality of information. According to (Qingqing *et al,* 2019), the most common data encryption method is the ` public key encryption method which makes it possible to establish a secure and confidential information channel without changing key for both parties.

Most public institutions experience lack of complete information on contract files of ongoing and past procurement contracts which complicates the execution, supervision and evaluation of contracts in public procurement (Ahimbisibwe, 2014). The use of ISO 15489 compliance in records management provide a comprehensive basis for auditing of full and partial records and ensures that the records are available to provide documentary evidence of conformity to the requirement of efficient

quality management system (ISO, 2016). Section 7.5.3.2 of ISO 9001 (2015) requires that the documented information is retained as evidence of conformity shall be protected from unintended alteration. According to Mustafaev *et al* (2019), the foundation of organizational-economic nature of the system of quality control is the normative technical and methodological documentation.

Proper records management as documented in ISO 15489 establishes the core concepts and principles for the creation, capture and maintenance of records (Riaz, 2016). In public procurement, records creation includes Recording, Referencing Classification and indexing which results into minimization of waste and procurement transparency, while records maintenance involves Backup, shelving, filing and archiving of procurement records (Namukasa, 2017). The need for International Organization for standards (ISO) is to reduce dysfunctional records management process which create room for corruption in procurement practice (Baiden et all, 2019).

2.3.4 Supplier Appraisal Practices

Supplier appraisal is defined as a business practice that is used to measure, analyze, and manage the supplier's performance in an effort to cut costs, alleviate risks, and drive continuous improvement (Fournier, 2017). It is the process of continuous collection and processing of information about suppliers, to establish and maintain an adequate connection Stevic, (2017). The process serves to align suppliers with organizational goals and foster a deeper relationship between the trading partners (Jelagat, 2017). As observed by Rathore and Agarwal (2016). The importance of performing supplier appraisal is to avoid appointing a supplier only to discover at a later date that the supplier is not able to perform effectively. Supplier appraisal practices were discussed based on due diligence, communication and commitment.

Due diligence is one of the main component of supplier appraisal practices where an agency performs checks to understand whether a supplier is genuine, capable, has required authorities and is of good repute and integrity (Independent Commission against Corruption, (ICAC), 2020). Globally, Due Diligence is a common practice. For Example, the German Government have proposed an Act which requires

companies to analyze human rights in their supply chain, fulfill due diligence and report obligations and establish complaint mechanism (Jenny, 2021). According to European Commission, (2020), the process of due diligence is carried out to ascertain whether contracts are performed in accordance with the agreed terms and conditions.

With the intensity of global competition, firms are recognizing that communication is a critical tool in buyer- supplier relationship (Schiele, 2019). Effective communication can be defined as dissemination of information to serve the intended purpose. According to (Msemwa, Ruoja & Kazungu, 2017), communication between buyer and supplier is only complete when it is accurate, timely, simple and clear. This in effect will reduce chances of errors in product development, build confidence and trust among suppliers and to an extent, minimizes chances of disputes along the supply chain (Momanyi, 2016). Other studies which have stressed on the importance of communication in buyer-supplier relationship includes; OECD, (2017), Chaudhary, (2016) and Adeitan *et al*, (2019).

Commitment can be defined as devotion by both the buying company and supplier to the signed business contract (Mafimi & Okoumba, 2018). Consulted literature indicates that partner's willingness to commit to a given relationship is born out of trust established over a period of time (Birasnav, *et al*, 2019). According to Shin, Park and Park (2019), buyer-supplier commitment has a positive effect on a firm`s performance. Therefore, the degree of commitment reflects the willingness of each trading partner to exert the necessary efforts and make the appropriate investments that would result in mutual benefit for both parties (Morsy, 2017).

2.3.5 Regulatory Framework

World Bank (2016) defines regulatory framework as series of policies and procedures governing procurement process. Application of audit standards on procurement process is to ensure that government activities are conducted in accordance with the relevant applicable laws, standards, and policies (Ireri *et al* 2017). Standards are therefore set of principles consisting of Statements of core requirements for compliance and professional practice of internal auditing and for

evaluating the effectiveness of performance that are internationally applicable at organizational and individual levels (IIA, 2016). Along with the International Professional process Framework, standards provide a systematic and disciplined approach to planning, executing, and documenting procurement activities (IPPF, 2017).

Although Audit standards can add significant value to the procuring entity because of its detailed familiarity and understanding of operational conditions, it may be hampered in upholding the public trust if protections to its independence are not established and cannot be maintained (Jacques, 2012). As noted by Delloite, (2017), audit in procurement can Aid in achieving cost cutting objectives by not only ensuring that contract terms are and conditions are met but also uncovering overpayments to suppliers. Auditors therefore have an important role to play in promoting improvements in procurement, by adopting a constructive approach and highlighting good practice (Ouko, 2015).

Public Procurement in Kenya operates within a regulatory framework set by the national government and is extended to the County Government and State Agencies (Amemba, *et al* 2013). Key legislation influencing performance of procurement process includes the Public Procurement and Asset Disposals Act, 2015, Public Procurement and Asset Disposal, 2020, The Constitution and the Public Financial Management Act 2012. According to Thai, (2017), reforms in public procurement are initiated to promote principles of good governance and address lack of accountability and inconsistency in policy application.

The relevance of Public Finance Management Act (PFMA, 2012) to public procurement is through budget control. Section 36(4) of the PFMA, 2012 states that every national government entity shall comply with the guidelines and in particular, to the preparation of the budget indicating key dates by which various exercises are to be completed. Alongside other instruments of government policy such as laws, regulation and joint action with other actors in society, the budget aims to turn plans and aspirations into reality and must be clear, transparent and credible if it is to command trust, and to serve as a basis of accountability (OECD, 2014). A sentiment

confirmed by Pay stream Advisors, (2016) who argues that budget control visibility is significant to organizations with multiple operations and that without strict adherence to limits of the budget, as well as the strategic use of spending within limits, then loss of money through overspending, mismanagement will be experienced.

2.3.6 Operational Performance of Service State Corporations in Kenya

A study by OECD, (2014) documents that since government procurement constitutes about 25%-30% of Gross Domestic Product, the amount of fund being channeled into the market through procurement increases hence making procurement process to be vulnerable to fraudulent activities. When fraudulent activities occur in procurement, the damage it causes extends beyond financial loss-posing serious threats to organization credibility and to its ability to achieve operational and programmatic objectives (UN, 2020). To mitigate the risk of fraud, existing controls, thresholds and procedures are regularly reviewed and assessed for relevance, adequacy and effectiveness (Deloitte, 2014).

Cost reduction can be defined as the achievement of real time and reduction in the unit cost of services provided without damaging their suitability for use (Rajguru & Mahatme 2015). It includes vendor consolidation, reducing maverick spend and tender management. According to Asian Development Bank, ADB (2021), whenever a decision is made, there exists trade-offs between the benefits gained and costs incurred relative to the benefits and costs of an alternative approach. Waithira, (2021) states that cost optimization can be achieved through engaging suppliers that offer variety of stock in-order to reduce costs that are related to acquiring new suppliers. While aiming to achieve cost reduction, the measures should not affect procurement processes and quality but act as an avenue to reducing unwanted costs in business operations (Gnonlonfoun *et al*, 2018).

According to OECD, (2013), Transparency and Accountability are critical for minimizing the risks that are inherent in public procurement. Transparency as defined by Beer, Rios and Saban, (2021) is the openness of public administration to citizens in the sense of making public information and documents related to the

procurement process. Transparency in procurement takes form in different ways, such as; publishing procurement policies; advance publication of procurement plans; advertisement of tender notices; disclosure of evaluation criteria in solicitation documents; publication of contract awards and prices paid and publishing supplier sanction lists. Accountability is a relationship based on the obligation to demonstrate and take responsibility for performance in light of the agreed outcomes (Fourie, 2017). In this case, all decisions need to be documented to provide sufficient information for audit or other review (State of Queensland, 2019).

Quality as a determinant of procurement performance encompasses a continuum of activities including supervision of process of manufacture of products to ensure that the products conform to what the designer or consumer intended (Mahdiraji *et al* 2012). According to Eskandarian, (2016) quality management is an activity which includes coordination, integration of procurement process and continuous improvement of products and services processes to create value and achieve satisfaction of all users of the products. Benefits derived from quality management includes; defect detection, continuous product improvement and reduction of errors (Diaz, 2020)

2.4 Empirical Review

2.4.1 Ethical Procurement Practices

Ochola *et al* (2012) conducted investigation on mainstreaming ethics and integrity. The study findings revealed that transparency should not be seen as an end; rather it is process that builds integrity in procurement system. The mere emphasis on integrity may slow down the procurement process affecting competitiveness in public procurement. Thus, a balance has to be ensured between integrity in procurement system and its competitiveness. A study on ethical issues in company`s buying practice by Vorosmarty and Matyusz (2015) recognized ethical process as a critical element of business relationship. The study revealed that the existence of purchasing code of conduct, its standardized form and recommendations significantly influences ethical behavior. This line of thought was shared by Fourie, (2017) who posits that a well-functioning ethical framework should underpin a

public sector environment that encourages high standards of professional ethics and integrity in procurement.

Yusuf *et al* (2014) carried out research on ethical supply chain. The study findings revealed that ethical process appear to be a powerful means to reduce socio-environmental impacts while simultaneously improving performance. These findings were echoed by Sengbeh (2015) who carried research on ethical process of Kenya Energy Sector. The findings established that firms in the energy sector ensure that procurement professional attitude and behavior coincides with goals and objectives of a firm. A study by Kalinzi, (2014) on Level of Professionalism in Public Procurement revealed that it is important to have an institutionalized, sustained procurement training programme, so that staff receive training upon induction as well as, periodically throughout their careers to update on their skills.

A study by Murray, (2019) on ethics in purchasing materials and services reveal that purchasing professionals are asset to any company and that the way in which they purchase items is vital to the success of a company. Grigoropoulos, (2019) carried out a study on the role of ethics in 21st century. The study reveals that ethics and the notion of ethical behavior and values in an organizational setting have become an organizational precedence in the 21t century. A study by Seyram, 2017 on the ethical challenges in procurement in public institution found that ethics play an important role on performance of public institutions in. Haron and Mahzan (2019) researched on ethics in procurement. The study concluded that companies implement ethics in procurement process to avoid any unethical behavior that could deteriorate the image of the company.

A study by Komakech (2016) on public procurement in developing countries, document that competitive procedures should be a formal standard for conducting procurement as the basis for driving efficiency, eliminating fraud and ensuring competitive outcomes. According to Lane County, (2016), the main purpose of implementing equity in purchasing and procurement program is to provide opportunities for increased participation by emerging small and businesses that are owned by women and minority groups. A study by Syne (2017) on social equity in

Public Procurement posit that, in order to remedy potential market failures, procurement industry must take active measures to ensure there is a more equitable and competitive markets

2.4.2 Tender Evaluation Process

Pohja, (2021) researched on the effect of bid evaluation rules on participation in public procurement competition with endogenous entry. The study revealed that in Finland, there are two types of evaluation from which procurement staff can choose. That is, price only evaluation and price plus quality evaluation of which the latter is called scoring auction. Zhang, (2020) Investigated construction of bid evaluation index system in government public project green procurement in China Based on D-S Evidence Theory. The study found out that the bid evaluation index system for government public project green procurement has a very important practical significance for government in terms of implementing the green procurement in the engineering field, building and improving the government public project green procurement system. Benonisen and Strand (2020) carried out a research on how different evaluation methods affect outcome in procurement. The study found out that price is weighted relative more than quality during the evaluation process.

A report by Integrated Centre for Migration Policy Development, ICMPD, (2020), document that the evaluation criteria should be fair, measurable, clear and all-inclusive, to ensure that the evaluation process is thorough, complete and robust. Morton *et al* (2015), performed a study on lifecycle costing. The study revealed that to achieve value for money, all relevant costs should be considered at strategy planning stage, design phase, tender development stage and at the Bid evaluation stage. This will enhance consideration of potential options and informs the business case and budget. A research by Kozik, (2019) on The Process of the Tender Evaluation in Public Procurement for Implementation of Design Documentation, revealed that price still remain criterion for evaluation by the contracting authorities.

Niewerth *et al* (2020) studied Tender evaluation through efficiency analysis for public construction contracts Stefan. The research revealed that, it is important to comply with the legal scope when evaluating supranational tenders for construction

projects. Sarker et al (2012) studied influencing factors of tender evaluation. The study found that, without a proper and accurate method for evaluating the tender, the performance of the project will be affected, thereby denying the client value for money. A research by Kusumarukmi & Adi (2019) on Public Tender Evaluation Process for construction projects revealed that, the most common problem during the Tender Evaluation Process is the bidding system's inability to provide a complete database of contractors with their personnel, works done, past experience and performance evaluation.

2.4.3 Procurement Records Management

Matto (2018) investigated non-compliance with Procurement documentation and records keeping in Tanzania Public procurement. The study found that, non-compliance with procurement records and documentation is caused by three major factors. First is the absence of procurement procedure manual to guide procuring entities on record keeping. Second is lack of training to staff in charge of procurement records and lastly, lack of management support. The line of thought is supported with a study by Tumuhairwe and Ahimbisibwe (2016) which revealed that issues relating to professional qualifications and training could affect records management performance in Procurement and disposal entities. The study by Shonhe and Grand (2019) who examined the Implementation of electronic records management systems in Botswana revealed that lack of training among records officers is making implementation of record management to become a challenge.

Netshakhuma (2018) studied the role of archives and records management legislation after colonialism in Africa. The study revealed that there was proven poor archives management for both government and citizens. This affected the government ability to manage resources effectively and to comply with international conventions. Similar study was conducted by Lung`aho *et al* (2014) in Kenya. The study Findings revealed that lack of effective record management training program and failure to enforce proper maintenance of procurement records greatly affects achievement of proper records management in public entities. A study by Freda, (2014) on records management established that a part from lack of training to records management

staff, there is also insufficient resources like office space which pose a serious challenge to proper records management in the University.

A Research conducted by Chiwanza and Mutongi, (2016) demonstrated that effective records management and storage can help improve quality assurance at any online and distance education institution. A study by Mosweu and Rakemane (2020) on the role of records management in ensuring good governance in Africa found that principles of good governance such as accountability, transparency and the rule of law can only be promoted in African countries when records are properly managed and made accessible to the public at the right time. Thanye et al (2015) examined an assessment of the appraisal process of architectural records at the Gaborone city council in Botswana. The study revealed various challenges, including lack of senior management support on records management services, inadequate qualified personnel, poor and inconsistency in the use of existing classification schemes, inadequate storage and lack of retention and disposition schedules resulting in absence of appraisal of architectural records.

2.4.4 Supplier Appraisal Practices

Delloite, (2015), carried out a study on supplier relationship management. The study documents that many companies are experiencing reputational and regulatory risks through their complex supply chains. As such, supplier audits are key activities for identification of non-conformance with an organizational values, standards, laws and regulations. A study by Jelagat and Bii (2017) revealed that there is a significant relationship between supplier appraisal procedure and performance of procurement. Opaleye *et al* (2020) researched on effects of supply relationship management process on performance of quoted food and beverage firms in Nigeria. The study also observed that involving suppliers in some decision relating to production process impacts performance of a buying firm.

Lin, *et al* (2017) studied Supplier Evaluation and Selection Process for Public Procurement in the Swedish Electricity industry. The study concluded that, ensuring fair dealing is essential for minimizing the potential risk from undue influence under the circumstance of discretion. Abushaikha (2014) carried out a study on Supply

Chain Integration from a Resource-based View Perspective. The findings of the study revealed that lack of regular sharing of information resulted in lower visibility and weak stock control. A study conducted by Bosibori, (2014) on supplier evaluation and performance of large food and beverage manufacturing firms in Nairobi, Kenya, revealed that firms that practice supplier appraisal as one of the supply chain process are able to benefit from reduction in number of complaints from users and in reduction in stock outs levels.

Henry (2018) researched on supplier appraisal on organizational performance. The study found that there is need to assess the performance of supplier to ensure that they perform effectively and achieve goals of the organization. A study by Imeri *et al*, (2014) found that supplier evaluation can be used as a tool to find areas of improvements and also a basis for ongoing dialogue. The study further revealed that through supplier evaluation, a company gets to know the supplier in a more profound way hence creating a conducive environment for future corporation. Manyrienza and Mulyungi (2018) concluded that there is a strong positive relationship between supplier appraisal and procurement performance in government ministries.

2.4.5 Regulatory Framework

The guidance note on procurement Risk Framework by Asian Development Bank, (ADB, 2021) described how risks are used as inputs into the identification, assessment and management of risks at the project level during procurement planning and through contract implementation stage. A review of the public procurement legal framework of Government of Mongolia by Partnership for Action on Green Economy (PAGE) and United Nations Environmental Programme, UNEP, (2016), found that the main barrier for the implementation of sustainable public procurement is lack of inclusion of environmental criteria when evaluating proposals. A study by Krivins, (2018) on legislative framework of in-house procurement concludes that, in the field where competition exists, verification of economic efficiency of the planned procurement contracts must be performed as an open procurement procedure where any supplier could participate.

An assessment report on policy space for Socially Responsible Public procurement (SRPP) regulation and implementation in Germany and Kenya by Stoffel, (2020) revealed that, a proactive integration of SRPP at the regional level of the multi-level regulatory framework for public procurement sends a clear message about existing leeway to all public entities at different governance levels to strengthen SRPP process. Naomi and Karanja (2016), researched on Role of regulatory framework on implementation of e- procurement by state corporations in the ministry of agriculture in Kenya. The study states that the benefits derived by service state corporations as a result of regulatory framework includes lower costs, improved quality of purchases and increased productivity. Mustafaev et al, (2019), researched on the regulatory framework in the organization, management and production efficiency. The study found out that compliance with set standards significantly improves the quality and effectiveness of the functioning of the enterprise.

Normanyo, *et al*, (2016) researched on role of regulatory framework of the Ghana public procurement policy on Small Medium Enterprise (SME) participation. The findings noted that the regulatory framework on public procurement does not facilitate SME participation. Karungani and Ochiri (2017) studied effect of policy and regulatory framework on organizational performance in Kenya. The study findings showed that indeed policy and regulatory framework within the procurement sector plays a very important role in improving organizational performance. Kimutai, *et al* (2016) carried out a survey on legislative and regulatory framework on compliance to procurement regulations. The study findings indicated that legislative and regulatory framework is a significant predictor of procurement regulations compliance.

2.4.6 Operational Performance of Service State Corporations in Kenya

Riany (2021) studied organizational structure and the performance of state corporations in Kenya. The study revealed that organizational structures have significant influence on operational performance of service state corporations in Kenya. However, most state corporations had not fully leveraged on the aspects of concentration of authority and clear chain of command. Ongeti and Machuki (2018)

conducted research on organizational resource and performance of Kenyan State Corporation. The study findings revealed that six indicators of performance (finance and stewardship, non-financial operations, dynamic, service delivery and corruption eradication) were adopted leading to a positive relationship between organizational resources and performance of state corporations in Kenya. Wanyonyi and Muturi (2015) researched on factors affecting Performance of Service State Corporation in Kenya among public technical training institutions in Kenya. The study found that, information technology, ethics and staff competency have a positive effect on performance of the procurement function in technical training institutions.

Georgino et al, (2021) reviewed literature on procurement process and financial performance with the aim of identifying the elements and practices under the responsibility of the Procurement process that can influence the financial performance of a company. The study found out that those financial indicators such as Profit, Return on investment are impacted by the procurement process. Hence, the positive relationship relationship between the procurement process and the company's financial performance can be achieved through systems and software used in procurement to gain agility,transfer information throughout the procurement process, or through relationship with Suppliers.

Juma and Mohamud (2024), carried out a research on the Impact of Procurement Practices on Organizational Performance: the study establishes that the struggles organizations face in optimizing their procurement practices directly impact their overall performance. Inefficient procurement practices can result in increased costs, delayed deliveries, and compromised product quality, leading to dissatisfied customers and loss of market share. The study also documents that to address challenges faced in procurement, management should implement strategies to streamline supplier selection, mitigate supply chain risks, and enhance transparency and data-driven decision-making can lead to improved procurement practices, resulting in enhanced organizational performance, cost efficiency, and customer satisfaction.

Flores *et al* (2020) researched on Sustainable Procurement to Enhance Organizational Performance in Supply Chain Management. The study findings of the study confirms that sustainable procurement is a key process to enhancing performance in supply chain management, and as a business source for: results improvement, sustainable development, and competitive advantage from a global market perspective. Mani et al. (2018) explored through a survey, the relationship between managing social sustain ability and its supplier benefits in India manufacturing industries. The results showed a positive relationship between supply chain performance (mainly on: reduction on lead time and reduced operating costs), and supplier social sustainable practices (mainly on: social responsibility and labor rights) and buyer's commitment to sustainability.

Harelimana, (2018), researched on the Impact of E-Procurement on the Performance of Public Institutions in Rwanda. The findings revealed that e-procurement in terms of electronic bidding, electronic supplier registration, electronic billing and electronic payment is significantly related to the performance of public institutions in Rwanda. Mrope, (2017) studied effect of professionalism on Performance of Service State Corporation in Kenya in public sector in Tanzania. The findings of this study indicated that adherence to procurement professionalism had the greatest influence on the performance of the procurement function in public entities. Other studies; Kakwezi and Nyeko, (2019), Kingori and Ngugi, (2014) and Agyemang, (2019), indicates Positive influence on performance of an organization.

2.5 Critique of the Existing Literature

The decisions under Public procurement implementation are often in search of sound procurement which translates into cost reduction, transparency and accountability and quality products and services. However, some organizations generally consider organizational efficiency in trying to achieve performance of an organization (Omagbon, 2016). In looking into the influence of Public procurement implementation on operational performance of service state corporations in Kenya, the available literature is limited in its focus on the implementation of public procurement. It is also evident that most studies on procurement implementation

(Mullying & Kambabasi, 2018, Tukuta & Saruchera 2015, Bobowski & Gola, 2017) have been carried out in other countries like South Africa, Ghana, Europe, United States and in Asian Countries as compared to Kenya.

Mullying and Kambabasi, (2018) carried out a research on effects of Monitoring and Evaluation of Public Procurement process and Performance of Rwanda Public Procurement. The findings revealed that a centralized system of contract change monitoring and control should be used to evaluate and determine whether potential contracts are used. Tukuta & Saruchera (2015) found that in high-growth oriented firms, lack of good corporate governance was a major barrier to effective international purchasing. Madzinga *et al* (2020), concluded that e-procurement solutions have a positive effect on the performance of the supply chain management systems. Daron & Plant (2020) partly addresses the gap in knowledge on procurement performance management systems.. However, these studies did not consider the influence of Public procurement implementation on operational performance of services state corporations in Kenya.

Haron and Mahzan, (2019) carried out a study on Ethics in Procurement. The study emphasized on the importance of implementation of ethics and also to create awareness by having official guidelines of the company. However the study failed to clearly discuss the ethical parameters such as, Privacy, transparency, integrity, equality, which the company should embrace to ensure there is clear guidance for sourcing and guidance to the company values, cultural substance and style in managers and employees.

Bergman and Lundberg (2013) studied tender evaluation and selection method in public procurement. The study argued that one the ways to perform evaluation where there is uncertainty is to weigh between the lowest price and quality. However, in most cases where there is uncertainty, market research or survey is conducted inorder to have facts on the prevailing market trend. This helps the evaluation team to make an informed decision in contract award.

Sibanda, (2020) concludes that Firms can leverage supply chain management as a source of competitive advantage that can reduce costs and optimize processes of the

business. A study by Solty`s (2014) on fair ranking in competitive bidding process in a security firm document that, a bidding process requires a fair and transparent ranking procedure. However, in its finding, the study found that the ranking procedure did not reflect the quality of bids resulting in one of the cases submitting more expensive bids and still winning the competition. This is an indication that the set criteria were not followed.

Namukasa, (2017) carried out a study on records management and procurement management. The study gave a clear description of records management process, from records creation, records maintenance & preservation and records access & use. The study however did not emphasize on data encryption which ensures that information on procurement are encrypt and can only be accessed by authorized users.

An empirical study by Imeri *et al* 2014 sought to address the key area of supplies evaluation from the supplier review perspective. The conceptual framework of the study is not clearly figured to bring out the independent and dependent variables

2.6 Research Gap

The empirical review had evidence showing that research in the area of Public procurement implementation have been done but not in a comprehensive approach in Kenya. Literature review available indicated that most of studies on influence of Public procurement implementation on operational performance of service state corporations in Kenya are in developed world like European Union, United States, advanced Asian countries and other African countries. Kinisa, (2012) studied Assessment of the Stakeholders' Compliance with Public Procurement Act of 2011 and It's Regulations in Tanzania. Mullying & Kambabasi, (2018) carried out a research on effects of Monitoring and Evaluation of Public Procurement process and Performance of Rwanda Public Procurement. Mensah, (2013) carried out research on evaluation of procurement process and its operationalization performance in public sector of Ghana. Morton *et al* (2015), carried out a research on life cycle costing for Scottish public bodies.

The International Institute for Sustainable Development, (2015), studied the rationale for green public procurement in China. Burkhard, (2018) conducted a study on opportunities and challenges of public procurement in china. Amarteifio, (2020) studied the Level of Compliance with The Public Procurement Act of Ghana. Alstar, (2019) conducted a Sentiment Report on compliance and Procurement in United Kingdom, UK. Tatrai & Vörösmarty, (2020) carried a comparative study on Non-Compliance in Public Procurement under EU Law. A study by Bobowski and Gola (2017) concluded that digitalization of the public procurement market in the EU has been found as important trigger of the sustainable, socially-inclusive growth based on innovation, due to expected increases in efficiency and transparency of the public spending, while streamlining and better targeting such procedures and contracts. None of these studies emphasized on the public procurement implementation in Kenya.

The literatures available on Public Procurement have not addressed its implementation influence on operational performance of service state corporations in Kenya (Amemba *et al*, 2013, Cherotich et al, 2018, Okonjo & Magutu. 2016, Orin, 2018, Koech et al, 2016. This calls for a search for new knowledge that have the potential of improving operational performance of service state agencies in Kenya. Hence, the advancement of public procurement implementation is important in this study with an intension of solving performance issues and compliance problems associated with service state corporations in Kenya. The study will fill pertinent gaps in literature by studying the selected independent variables (Ethical procurement practices, Tender Evaluation Process, procurement records management and supplier appraisal practices) on the relationship between the Public procurement implementation and the operational performance of service state corporations in Kenya. The study will add value to the existing literature by providing empirical evidence on the influence of Public Procurement implementation on operational performance of service state corporations in Kenya, and fill the existing contextual and conceptual gaps.

2.7 Summary of the Study

The literatures reviewed suggested that public institutions could improve on the overall performance if they comply and implement procurement process appropriately. The major problem of service state corporations in Kenya is with regard to non-compliance to public procurement leading to high level of fraud which have become a norm every financial year. The availability of the regulatory frameworks which acts as a mediating variable enhances performance of procurement through minimization of fraud, improving transparency and accountability and ensuring there is audit trail through proper records management.

The literature and empirical review indicated that studies on areas of procurement cover many parts of the world. The researchers have suggested that procurement process will improve the performance of service state corporations if the process are complied with and well implemented. Previous studies which were reviewed shows that Public procurement implementation has a positive impact on firm performance; however, most of the research literatures available on Public procurement have not addressed its influence on operational performance of service state corporations in Kenya. Therefore, this study will fill the gaps in literature by studying the selected independent variables on the relationship between the Public procurement implementation and operational performance of service state corporations in Kenya. This study will be quite timely and is bound to benefit the service state corporations and the entire State corporations in Kenya

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research Methodology, as its name suggest is the study of methods, so as to solve the research problem (Surbhi, 2018). This Chapter explains the methodology used in the entire study. It looked at the research design, research philosophy, target population, sampling techniques and sample frame, research instruments, data collection instrument, data collection procedure, pilot test, validity and reliability. Analytical techniques were also discussed. According to Mishra and Alok, (2017), Research Methodology is a science of studying how research is conducted systematically. The methodology chapter justifies the design choices by showing that the chosen methods and techniques are the best fit for the research aims and objectives, and will provide valid and reliable results (Jansen & Warren, 2020).

3.2 Research Design

Grey, (2014) defines research design as a set of procedure on the required data, the methods to be applied to collect and analyze data and how all this is going to answer the research question. Research Design is a plan that describes how, when and where data are to be collected and analyzed (Akhtar, 2016). A good research design has a clearly defined purpose and has consistency between the research questions or hypotheses and the proposed research method (Moser & Korstjens, 2018).

This research adopted survey design in the collection of data. Survey design means gathering information about the characteristics, actions or opinions of large group of people (Dangal, 2021). Survey design is used in many quantitative studies because the data can be collected in a short period of time is relatively free from several types of errors (Gürbüz, (2017). It is also inexpensive, common and can be made accessible to a wider group of individuals. According to Stats, (2019), Survey design is critical in determining quality research and obtaining good data. It is an accepted way of producing statistical information that is used for planning vital public services

such as education, health, housing, and transport. According to Leavy (2017), survey research design is appropriate in research where large population is geographically spread, which was the case in this study.

3.2.1 Research Philosophy

Philosophy is a branch of human inquiry and as such it aims at knowledge and understanding (Payne, 2015). Research philosophy is a system of researcher`s thought following which reliable knowledge about the research object is obtained (Zukauskas et al, 2018). Mauthner (2020) document that research philosophy is a belief about the ways of collecting data, analyzing data and using data about a phenomenon. According to Tantray and Dar, (2016), Philosophy is multi-disciplinary and its methodology is logical, analytical, dialectical and empirical. There are philosophical arguments that have led the study to adopt the survey design. This includes a functionalist paradigm, which is anchored on positivism since it accommodates both old and new knowledge.

This study is based Functionalism Philosophy, which is a theoretical perspective that focuses on the functions performed in society by social structures such as institutions, hierarchies, and norms (Hurlimann, 2019). In this case, organizational norm is a specific organizational context that affects the management of the organization (Edwards & Sułkowski, 2014). A functionalist Paradigm is realistic and positivistic. According to Park *et al* 2019, Studies aligned with positivism generally focus on identifying explanatory associations or causal relationships through quantitative approaches. In addition, positivism works on quantifiable observations and statistical analysis and relate to the importance of what is given in general, with more strict focus to consider pure data as well as facts without being influenced by interpretation of bias of human. Hence, this research philosophy is appropriate for this study since it can be used to investigate what truly happens in organizations through scientific measurement of people and system behaviors.

3.3 Target Population

Population is defined by Masid (2018) as the study`s target that it intends to study or treat. Population of this study comprised of all the Service State Agencies in Kenya. According to Kenya National Bureau of Statistics, (KNBS, 2013), there are 132 state corporations which provide services to Kenyans and are classified into various segments such as the executive agencies, regulatory authorities, research institutions, universities and tertiary institutions, which are located across the country, thus, the study population. According to Schober et al, (2018), a target population includes a set of people, events or objects to which researchers wish to generalize the results of their research. Kothari & Garg, (2014) describe study population as a group of individuals taken from the general population who share a common characteristic. The study targeted Audit, ICT and Procurement Managers respectively in the 132 Service state corporations in Kenya. This makes a total of 396 respondents. The target population for this study was therefore 396 respondents. The study purposively targeted these groups because they are involved in executing key procurement activities at various stages. Table 3.1 shows the number of service state corporations, target population and their percentages.

Table 3.1: Distribution of Target Population

Units of Study	Total	Audit Manager	ICT Manager	Procurement Manager	Target Population	(%)
Executive Agencies	62	1	1	1	186	46.97%
Independent Regulatory Authority	25	1	1	1	75	18.97%
Research Institutions	45	1	1	1	135	34.09%
Total	**132**				**396**	**100.00**

Source: (KNBS, 2013)

3.4 Sample and Sampling Technique

Oribhabor & Anyanwu (2019), defines sample as a group of relatively smaller number of people selected from a population for investigation purpose. According to Mooney and Garber (2019), a sample as a list of all those within a population who can be sampled and may include individuals, households or institutions. This study

employed a stratified random sampling technique since the population was not homogenous. The population was therefore stratified into a number of sub-population or strata and sample items were selected from each stratum. According to Chung and Trithapura (2015), stratified sampling is appropriate whenever there is a heterogeneity in a population that can be classified with ancillary information. This was appropriate for this study since Service State Corporations are in various sector (Executive Agencies, Independent Regulatory authority and research institutions and as such, are deemed to be heterogeneous. The aim of stratification was to ensure that sub-groups were proportionately represented.

The sampling frame for this study consisted of Service State Corporations in Kenya. According to Kothari, (2014), sampling frame consists of a list of items from which the sample is to be drawn. The service state corporations included the Executive agencies, Independent regulatory agencies and Research institutions, public universities, tertiary education and training institutions. The list of the service state corporations was drawn from the records of Kenya National Bureau of Statistics, 2013. The respondents consisted of the Audit Manager, ICT Manager and Procurement Manager distributed across the 132 service state corporations in Kenya. The study followed the method of Taro Yamane to determine the sample size from a given population as shown below:

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

Where;

n= sample size

N= Population under study

e= margin error of 5%

From the target population of 396 as shown above, the sample size will be

$$n = \frac{396}{1 + 396(0.05)^2}$$

n= 396/1+0.99

n= 396/1.99.

n=199

The Sample size is 199 from the total population of 396. The sample size represents 50% hence, a good representation of the populations since it is greater than 10 percent of the target population (Kothari, 2014).

From a population N=396, a proportional allocation of the strata was adopted in order to get a sample size of 199: N_1=93PM, N_2=38 IM, N_3=68 AM.

Table 3.2: Sample Distribution for Unit of Study

Units of Study	Total	Audit Manager	ICT Manager	Procurement Manager	Target Population	(%)	Sample Size
Executive Agencies	62	1	1	1	186	46.97%	93
Independent Regulatory Authority	25	1	1	1	75	18.97%	38
Research Institutions	45	1	1	1	135	34.09%	68
Total	**132**				**396**	**100.00**	**199**

From table 3.3, the sample size for all executive agencies is 93, for regulatory authority is 38   and for research institutions is 68, totaling to 199 respondents. The respondents for each category were then sub divided into Audit, ICT and Procurement Managers respectively. Table 3.4 indicates how the respondents were distributed

Table 3.3: Sample Size Distribution for Respondents

Segments	Executive Agencies	Independent Regulatory Authority	Research Institutions	Sample Size
Audit Managers	32	12	24	68
ICT Managers	13	8	17	38
Procurement Mangers	48	18	27	93
Total				**199**

3.5 Data Collection Method

Questionnaire was used as the main tools for data collection. The selection of questionnaire was due to the type of data to be collected, the study objectives and time available. The questionnaire was used to get information from Procurement Managers, ICT Managers and Audit Managers respectively. According to (Douglas 2015), primary data are those which are collected for the first time by the researcher. Since the sample size was quite big (199), the questionnaire was more appropriate. In addition, Questionnaires were used because the study was concerned with variables that cannot directly be observed such as views, opinions, perceptions and feelings of the respondents.

The first section comprised of the demographic characteristics of the respondents such as the education level, and work experience while second section was divided into four parts concentrating on the research variables. In obtaining data, structured questionnaires with a Likert scale was used. According to Joshi *et al* (2015) A Likert scale utilizes the item analysis approach where a particular item is evaluated between responses whose total score is high and those whose scores are low.

3.6 Data Collection Procedure

Data collection is a systematic process of gathering observations or measurements (Bhandari, 2020). The researcher obtained a list of all the service state corporations from the Kenya Bureau of Statistics. An introduction letter from the university and a permit from National Commission for Science, Technology and Innovation (NACOSTI) were used to collect data from service state corporations in Kenya. Research assistants were then recruited based on competence in data collection and understanding of the area under study. The field assistants were trained extensively on the procedure of administration of questionnaires and in interpretations of responses from respondents. In order to fully understand the purpose and methods of data collection, the researcher also used the research assistants in piloting and modifying the research instruments. With regard to data collection procedure, the researcher came up with a clear program for data collection and scheduled appointments with respondents, particularly on the time, date, time location where

the data was collected. The area of study for this research was the service state corporations in Kenya. The target participants were the managers (ICT, Audit and Procurement) of the service state corporations who filled in the questionnaires. These target participants had wide knowledge about the public procurement implementation and operational performance of service state corporations in Kenya.

The study adopted a self- administer questionnaire approach. According to Kabir, (2016), the choice of self-administered questionnaires enables the study to reach a large number of potential respondents in various locations. The respondents were expected to answer the questions and return the questionnaires back to the researcher later. Where the responses were not clear, the research assistants followed up with the respondents for clarity. According to Leavy, (2017), questionnaires can be administered in person, mailed to the respondents or distributed electronically. The researcher, with the help of research assistants hand delivered the questionnaires to the respondents, using drop and pick method of data collection. The questionnaires were then collected within a period of three weeks from the day of issuance. However, the duration was prolonged in instances where the respondents failed to return the filled questionnaire at the stipulated time. This method is convenient owing to the length of the questionnaire, the availability of the respondents during the data collection duration and the geographical dispersion of the population.

3.7 Pilot Testing

Pilot testing is critical for identifying problems for respondents and with regard to question wording and content, order/context effects, and visual design (Moore, 2014). According to Sekaran (2015), questionnaire is constructed and tried in the field in order to remove any unclear and other deficiencies. Data collected during the pilot study was not used to test hypothesis or included with data from the actual study when results are reported. The questionnaire was then administered to a few firms with the aim of pre-testing the suitability of the questions in the questionnaire. The respondents were requested to fill the questionnaires and notify the researcher in-case of any problem or mistake identified. The researcher therefore collected the questionnaires from the respondents and then made necessary correction. According

to In, (2017), conducting a pilot study does not guarantee success in the main study, but it does increase the likelihood of success. Pilot study was administered on 13 institutions that were not forming part of the target population.

3.7.1 Test for Validity of Research Instruments

Validity refers to how accurately a method measures what is intended to measure (Middleton, 2019). If the research has high validity then it is an indication that the measurement is valid. According to Leavy, (2017), validity is the degree to which the empirical measure or several measures of the concept, accurately measures the concept. The validity tests that were conducted included: face validity, content validity and construct validity. Face validity, which according to Heale and Twycross (2015), refers to the extent to which a test appears to measure what it is intended to measure. Subsequently, the researcher sought the opinion of specialists in the area of procurement and that of the assigned supervisors on whether as per face value the questionnaire seemed appropriate in both design and structure and if it measured the required constructs. An assessment of each item was done to determine if it corresponded with the given conceptual framework of public procurement implementation and performance. This was proved with few modifications of the constructs to for suitability.

In content validity, the questionnaire was formulated and organized as per the study variables to warrant sufficiency and representativeness of each variable item. The researcher then asked the supervisors and procurement experts to critically analyze the items measuring specific constructs with the aim of ascertaining whether the full content pertaining to any given construct was represented in the items and if such content was justified with evidence from literature. On scrutiny, various suggestions for correction were made and the ultimate research instrument was produced. According to Sekaran, (2015), content validity is the extent to which the measurement device provides adequate coverage of investigative questions.

The measurement of validity is in the form of construct validity that measures the construct accurately. According to Taherdoost, (2016), construct validity refers to how well you translate or transform a concept , an idea or behavior that is a construct

in a functioning and operating reality. Construct validity was achieved through limiting the questions to conceptualization of variables and ensuring that the indicators of every variable fell within the same construct. The motive of this check is to ensure that each measure adequately assess the construct it is purported to assess. The study used different groups of experts in the field of procurement and issued them with the questionnaires. The experts were expected to assess if the questionnaires could be used in examining the influence of public procurement implementation on operational performance of service state corporations in Kenya. The coefficient of the data gathered from the pilot study was computed using Statistical Package for Social Sciences (SPSS) version 21. A coefficient of above 0.5 was obtained and this upheld the validity of the data collection instrument. The recommendations from the procurement experts and the pilot study respondents were used to improve on data collection instruments.

3.7.2 Reliability of Research Instrument

Reliability ensures error free measurement (Park, 2018). If a measurement device or procedure consistently assigns the same score to individuals or objects with equal values, the instrument is considered reliable. Reliability involves the consistency, or reproducibility, of test scores i.e., the degree to which one can expect relatively constant deviation scores of individuals across testing situations on the same, or parallel, testing instruments. The study used Cronbach alpha coefficient to determine reliability of the instrument in this study. According to (Taber, 2018), Cronbach Alpha Coefficient is an appropriate Model because it is a better indicator of internal consistency of sample items. 0.7 was be the minimum cut off point. Any item that was below the 0.7 coefficient reliability was dropped. Heale *et al* (2018) posits that a coefficient of 0.7 and above implies that there is high degree of reliability of data.

3.8 Data Analysis and Presentation

Data analysis is the systematic process of applying statistical or logical technique in evaluating measurable and verifiable data (Ali, 2021). Data analysis aims at fulfilling the research objectives and to provide answers to research questions. The choice of

analysis procedure was pegged on how well the technique correlates with the objectives of the study to the scale of measurement of variables in question. The stages of data processing include editing, coding, classification and tabulation. Editing of data is a process of examining the collected raw data to detect errors and omissions and to correct these when possible. Coding refers to the process of assigning numerals or other symbols to answers so that responses can be put into a limited number of categories or classes. Classification is the process of arranging data in groups of common characteristics, that is, the data that bear the same characteristics placed in one class while tabulation is the process of summarizing raw data and displaying the same in compact form for further analysis (Indukoori, 2019).

The collected data was analyzed and the information codified and entered into a spreadsheet and analyzed using frequencies and percentages obtained from Statistical Package for Social Science (SPSS) version 21. SPSS version 21 was used to analyze the data since it allows data sets to be loaded more easily making it user friendly (Frey, *et al,* 2017). Data presentation of the statistics of the findings was in the form of frequencies, percentages, mean, median, mode, standard deviation, table and graphs. The statistic measures were classified into two groups of descriptive statistics and inferential statistics which the study adopted. According to Kaur *et al*, (2018) descriptive statistics are used to summarize data in an organized manner by describing the relationship between variables in a sample or population. Inferential statistics is used in research to come to conclusion and make predictions based on the data (Sutanapong & Louangrath, 2015). As described by Zhang *et al* (2018), inferential statistics deal with the populations based on results obtained from samples that include analysis of variance (ANOVA), correlation analysis, coefficient analysis and multiple regression analysis.

3.8.1 Correlation Analysis

This study used Correlation to measure association between variables. Most often, the term correlation is used in the context of a linear relationship between two continuous variables and expressed as Pearson product moment correlation (Schober et al, 2018). A high or positive correlation means that two or more variables have a

strong relationship with each other, and exists if one variable increase simultaneously with the other. On the other hand, a weak correlation exists when if one variable decrease when the other increases and the variables are hardly related. Pearson`s product moment coefficient is the measurement of correlation and ranges between +1 and -1, where +1 indicates the strongest positive correlation possible and -1 indicates the strongest negative correlation possible (Yu *et al* 2021)

3.8.2 Regression Analysis

While correlation analysis helps in identifying associations between two variables, regression technique is used to model the relationship so as to be able to predict what will happen in real world setting (Gogtay *et al*, 2017). According to Foong *et al* (2018) regression is a statistical technique widely used by researchers in many fields to describe the nature of the relationship between variables. It consists of analysis consists of the prediction of a continuous independent target from a set of other predictor variables (Kumari & Yudav, 2018). This study investigated the relationship between public procurement implementation and operational performance of Service State Corporations in Kenya.

The study used the following regression model.

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

Where:

Y = Operational performance of service state corporations in Kenya

β_0 = Constant or intercept of the variable Y

β_1, β_2, β_3, β_4 are the coefficients of the independent variables

X denotes the independent variable (public Procurement implementation)

X_1 = Ethical procurement practices

X_2 = Tender Evaluation Process

X_3 = Procurement records management

X_4 = Supplier appraisal practices

To test for moderating effect, the multiple regression equation used was as below:

$$Y = \beta_0 + \beta_1 X_1 * Z + \beta_2 X_2 * Z + \beta_3 X_3 * Z + \beta_4 X_4 * Z + \varepsilon$$

Z = Regulatory Framework

ε =represents the error term explaining the variability of the quality of performance as a result of other factors not counted for.

3.8.3 Multiple Regression Model

Multiple linear regression is an extension of the simple linear regression model. It is analysis procedure to use with more than one explanatory variable. According to Lane, (2022), a regression coefficient in multiple regressions is the slope of the linear relationship between the criterion variable and the part of a predictor variable that is independent of all other predictor variables. The variables used to predict the value of the dependent variable are called the independent variables. According to Rundel, (2014), regression models are useful for making predictions for new observations not included in the original dataset. This study used multiple regression analysis to test the relationship between the independent and the dependent variables.

3.8.4 Hypothesis Testing

A statistical hypothesis test is a method of statistical inference used to determine a possible conclusion from two different, and likely conflicting hypothesis (Khan & Mir, 2021). It involves formulating two competing hypotheses, the null hypothesis (H_0) and the alternative hypothesis (Ha), and then collecting data to assess the evidence (Siegel, 2016). The hypothesis of this study was tested by running an Ordinary Least Square regression model for the combined sub-constructs of each independent variable against the combined measures of the dependent variable. The acceptance or rejection criteria was that, if the p-value is greater than 0.05, the study fails to reject the H_0, but if p-value is less than 0.05, the H_0 is rejected.

In this study, two measures of F-Test and T-Test were used in the analysis to fit into the regression model. F-test usually is a test where several parameters are involved at once in the null hypothesis while T-test concerns only one parameter (Goldstein

2013). According to Ugoni and Walker, (1995), the T-distribution is a probality distribution similar to normal distribution. It is commonly used to test hypothesis involving numerical data. The F-Test, which is a predictive test, was used to check the overall regression model, while the T-Test was used to test whether or not each of the independent or predictor variables of this study has a statistically relevant effect on the dependent variable of the study. The Hypothesis tests for the variables of the study are illustrated in table 3.4 below.

Table 3.4: Hypothesis Testing

Hypotheses	Hypothesis Test	Decision Rule
Hypothesis 1 **H$_{01}$:** Ethical procurement practice does not significantly influence operational performance of service state corporations in Kenya.	T-test/ F-Test	If the P $\leq$ 0.05, reject **H$_{01}$:** and accept H$_{a1}$
Hypothesis 2 **H$_{02}$:** Tender Evaluation Process does not significantly influence operational performance of service state corporations in Kenya.	T-test/ F-Test	If the P $\leq$ 0.05, reject **H$_{02}$:** and accept H$_{a2}$
Hypothesis 3 **H$_{03}$:** Procurement Records management does not significantly influence operational performance of service state corporations in Kenya. .	T-test/ F-Test	If the P $\leq$ 0.05, reject **H$_{03}$:** and accept H$_{a3}$
Hypothesis 4 **H$_{04}$:** Supplier Appraisal Practice does not significantly influence operational performance of service state corporations in Kenya. . Hypothesis 5 **H$_{05}$:** Regulatory framework does not	T-test/ F-Test	If the P $\leq$ 0.05, reject **H$_{04}$:** and accept H$_{a4}$
moderate public procurement implementation and operational performance of service state corporations in Kenya	T-test/ F-Test The variables are tested at 5% or 95% level of significance.	If the P $\leq$ 0.05 for all independent variables, reject **H$_{05}$s** and accept Ha5s

3.9 Diagnostic Tests

A diagnostic test is carried out in research to determine the nature of a particular condition. It is examined to find out areas of weaknesses and strength in order to determine a condition. According to Sekaran, (2015), in order to have a regression model and estimates that actually represent something, then the assumptions should

be reasonable. The normality test and test for heteroscedasticity helps in checking the relationship between independent and dependent variables (Chikere, *et al* 2019). The test for this study included normality test, multicollinearity test, heteroscedasticity test and autocorrelation test.

3.9.1 Normality Test

Normality of error terms is a basic assumption of linear regression model (Shukia, 2015). When the data satisfies the normality, it shows probability distribution curve with the highest frequency of occurrence at the center, and the frequency decreases with distance from center (Kim & Park, 2019). Since the normality assumption is primarily of importance for small samples, non-normality of the errors may be addressed by increasing the sample size (Williams, 2013). This study performed a quintile-quintile test (Q-Q test) for normality on the dependent variable. A Q-Q plot is a plot of the percentiles of a standard normal distribution against corresponding percentiles of the observed data. If the observations follow approximately a normal distribution, the resulting plot should be roughly a straight line with a positive slope and the Q-Q plot should be linear. When this is not possible, inference in small samples with non-normal errors can be achieved by using bootstrap methods or the specification of a Generalized Linear Model with an error distribution other than the normal.

3.9.2 Multi-collinearity Test

Multicollinearity is the event of great inter correlation among the factors in a multiple regression model (Shrestha, 2020). It indicates to the linear relationship between and among the independent variables. This study used correlation matrix to investigate the pattern of inter-correlation among all the variables. Gujarati and Porter (2012), recommends that inter-correlation among the independent variable beyond 0.8 is a sign of multi-collinearity and should be put to further scrutiny. However, Leech, *et al* (2005) observed that use of correlation matrix to indicate signs of lack of multi-collinearity among the variables is not adequate. Therefore, this study used Variance Inflation Factor (VIF) which is a collinearity diagnostic factor to further test the multi-collinearity issues. According to Shrestha, (2020), If $VIF \geq 5$ to

10, there will be multicollinearity among the predictors in regression model. If the value of VIF is $1 < VIF < 5$, it specifies that the variables are moderately correlated to each other.

3.9.3 Heteroscedasticity Test

One of the problems commonly encountered in cross-sectional data is where there is unequal variance in the error term also known as heteroscedasticity. According to Astivia and Zumbo (2019), heteroscedasticity is defined as non- constant error variance where there exists incorrect transformation of data. Creswell and Creswell (2017), points out that if a model is well fitted, there should be no pattern to the residuals plotted against the fitted values. Heteroscedasticity was tested using Breush –Pagan test as recommended by Melanie *et al* (2015). According to Kothari (2014), when a p-value $<\_0.05$, it would imply that there will be heteroscedasticity and would lead to rejection of the null hypothesis at 5 percent level of significance.

3.9.4 Autocorrelation Test

Autocorrelation is a characteristic of data in which the correlation between the values of the same variables is based on related objects (Park, 2018). Autocorrelation measures the correlation of a variable with itself, when the observations are concerned with a time lag (temporal autocorrelation) or in space (spatial autocorrelation). It violates the assumption of instance independence, which underlines most of the conventional models. Autocorrelation signals the processing for analyzing functions or series of values such as time domain signal. Autocorrelation is a matter of degree and therefore it can either be positive or negative. This study used Durbin Watson to test for Autocorrelation. According to Creswell and Creswell (2017), Durbin Watson test is a measure of Autocorrelation in residuals from regression analysis.

3.9.5 Confirmatory Factor Analysis

Factor analysis is a collection of methods used to examine how underlying constructs influences the responses on a number of measured variables (DeCoster, 1998). It is a

statistical technique used to recognize, interpret, and model patterning in multivariate datasets (Read, 2018). Factor analysis as a dimension reduction technique was conducted to retain the smallest number of factors that had the highest influence in terms of the total variance explained. This study used the Principal Component method approach to conduct factor analysis.

3.10 Operationalization of Study Variables

According to Tariq, (2015), Operationalization is the process of strictly defining variables into measurable and is significant because it makes hypothesis strong, clear and standardizes the variables being used in research. Measurements from different sources were employed in the study. This study used questionnaire as the main tools for data collection. Likert scale was used to examine how strongly respondents agreed or disagreed with the statement(s). According to Joshi et al, (2015), likert scale is applied as one of the most fundamental and frequently used psychometric tool in educational and social science research. The nature of the collected data in this research displayed most of these features and hence the suitability of the Likert scale.

Ethical Procurement Practices. Ethical procurement practices are accepted norms that supply chain professionals and institutions should adopt to ensure sound procurement process (Sidaeli & Athumani, 2020). In this study, Ethical Procurement Practices was objectively measured by use of integrity, confidentiality and fair competition. This variable was measured in Part B of the questionnaire.

Tender evaluation Process: Tender evaluation process is a procurement activity carried out to select the best offer from the respective bids (Kozik, 2019). In this study, tender evaluation process was measured by use of tender opening, comparative analysis and tender award. This variable was measured in Part C of the questionnaire.

Procurement Records Management. Procurement records management is the efficient and systematic control of the creation, receipt, maintenance, use and disposal of all documents, files, invoices relating to procurement and other

organization activities (PPDPPA, 2022). Procurement records management was measured by use of records creation, records maintenance and encryption and records access and use. This variable was measured in Part D of the questionnaire.

Supplier Appraisal Practices. Supplier appraisal practices is a continual process that involves evaluating and approving potential supplier (CIPS, 2013). It can be used to evaluate existing suppliers to monitor their performance, to increase value, mitigate and drive improvement. Supplier appraisal practices was measured by use of due diligence, communication and commitment. This variable was measured in part E of the questionnaire.

Regulatory framework. This is the moderating variable in this study. The instrument used four items to measure how regulated framework moderated the relationship between public procurement implementation and operational performance of service state corporations in Kenya. In this study, the moderator was measured using audit standard, procurement law and budget control. Regulatory Framework was measured in part F of the questionnaire.

Operational Performance of Service State Corporations in Kenya. This is the dependent variable in this study. This variable was measured using fraud levels, purchasing cost and transparency and accountability. Operational performance was measured in part G of the questionnaire.

Table 3.5: Operationalization of the Study Variables

Type of variable	Variable	Indicators	Questionnaire Reference
Independent Variable	Ethical Procurement	Integrity	Questions (1 to 4)
		Confidentiality	
		Fair competition	
	Tender evaluation process	Tender opening	Question (1 to 4)
		Comparative analysis	
		Tender award	
	Procurement records management	Records creation	question (1 to 4)
		Records maintenance and encryption	
		Records access and use	
	Supplier appraisal practices	Due diligence	Question (1 to 5)
		Communication commitment	
	Regulation framework	Audit standards	Question (1 to 4)
		Procurement law	
		Budget control	
Dependent Variable	Operational performance of Service State Corporations in Kenya	Fraud levels	Question (1 to 6)
		Operation costs	
		Transparency and accountability	

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

The study sought to assess the influence of Public procurement implementation on operational performance of service state corporations in Kenya. Specifically, the study looked at ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices and regulatory framework. This chapter presents the empirical findings and results of the application of the variables using survey design. Data was analyzed, results interpreted on the basis of the overall objectives of the study.

4.2 Response rate

A total of 199 questionnaires were distributed to the respondents out of which 158 questionnaires were successfully filled and returned. This represents a response rate of 79.4%. According to Fosnacht *et al* (2017), a response rate of 75% and above is acceptable. This s supported by Dyer, et al (2018), who posit that a 50% response rate is sufficient; a rate of 60% is good and that above 70 is exceptional. The outstanding response rate is attributed to the method of data collection used, whereby the researcher together with the research assistants administered the questionnaires to the respondents who filled them after which they were then collected. Therefore, this study`s response rate of 79.4 is acceptable. The response rate at 79.4% is comparable to similar studies in the domain of supply chain management such as Mwangangi, (2016) whose study on influence of logistics management on performance of manufacturing firms in Kenya reported a response rate of 70%.

Table 4.1: Response Rate

	Frequency	Percentage
Responded	158	79.4
Not respondent	41	20.6
Total	**199**	**100**

4.3 Pilot Result

4.3.1 Reliability Analysis

Reliability is the degree to which an assessment tool produces consistent results (Creswell & Creswell, 2017). The study used Cronbach alpha coefficient to determine reliability of the instruments. According to Tavakol and Dennick, (2011), Cronbach Alpha Coefficient is an appropriate Model because it is a better indicator of internal consistency of sample items where 0.7 is used as the minimum cut off point. The higher alpha coefficient value means there is consistency among the items measuring the concept of interest (Taber, 2018).

The research findings indicated that procurement ethical practices had a coefficient of 0.843, Tender Evaluation process had a coefficient of 0.883, procurement records management had a coefficient of 0.703, supplier appraisal had a coefficient of 0.808, regulatory framework had a coefficient of 0.940 while Performance of Service State Corporation in Kenya had coefficient of 0.949. From the analysis, it can strongly be deduced that all the variables measure Performance of Service State Corporation in Kenya. all the factors show that the Cronbach Alpha were above the required coefficient of 0.70 thus the results of the study were highly reliable as indicated in table 4.2. This finding is in line with Kubai, (2019) which states that the function of reliability is to ensure that the observe score is almost like the true score obtained by minimizing the error in measurement.

Table 4.2: Pilot Study Reliability Statistics

Factor/Variables	Number of Items	Cronbach`s Alpha	Comment
Ethical Procurement Practices	4	0.843	Accepted
Tender Evaluation process	4	0.883	Accepted
Procurement Records Management	4	0.703	Accepted
Supplier Appraisal practices	5	0.808	Accepted
Regulatory Framework	4	0.940	Accepted
Operational Performance	6	0.949	Accepted

4.3.1 Validity Result

Validity refers to how accurately a method measures what is intended to measure (Middleton, 2019). If the research has high validity then it is an indication that the measurement is valid. According to Leavy, (2017), validity is the degree to which the empirical measure or several measures of the concept, accurately measures the concept. This study used face validity, content validity and construct validity. According to Heale and Twycross (2015), face validity refers to the extent to which a test appears to measure what it is intended to measure while a content validity is the extent to which the measurement device provides adequate coverage of investigative questions. In content validity, the questionnaires were formulated and organized as per the study variables to warrant sufficiency and representativeness of each variable item

The researcher sought opinion and assistance of experts in the field of procurement on whether questionnaires were suitable in both design and structure to measure the required validity. The recommendation from the experts confirmed that both face validity and content validity proved validity of the research instrument.

4.4 Demographic Information

This section analyses the demographic characteristics of the respondents. This is in reference to gender, age, gender, education level, organization category and positions held by the respondents respectively.

4.4.1 Age

The respondents were asked to indicate their age. In research, age is tested in order to know the level of experience of the respondents. As summarized in table 4.3, 22.2% of the respondents indicated that they belonged to the 20-40 age brackets while 41.1% fell in the age bracket of 41-50. Those aged above 50 were represented by 36.7 %. The result presented shows that the majority of the respondents were between 41-50 years of age. This implies that respondents were well distributed in terms of their age. The age of the respondents played a key role in this study. This is

attributed to the vast experience that the respondents have in public procurement, which helped in giving more insight into the study outcome. From the results in Table 4.3, the age categories were well represented thus enabling the researcher to determine the relationship between public procurement implementation and operational performance of service state corporations in Kenya.

Table 4.3: Distribution by Age Bracket

Age Distribution	Frequency	Percentage %
26-40	35	22.2
41-50	65	41.1
Above 50	58	36.7
Total	**158**	**100.0**

4.4.2 Gender Distribution

The study sought to establish the gender of the respondents. A simple majority of 65% of the respondents were male while the rest 35% were female as shown in table 4.4 below. This good distribution depicts a fair balance of gender. The relevance of gender distribution with regard to public procurement implementation is that it shows that both genders were involved in this study and thus the finding of the study did not suffer from gender bias. The finding also conforms to the requirement of Kenyan 2010 constitution, which requires for equality in gender representation at all levels. Finally, the gender balance in the procurement sector is a proof of a successful struggle of gender mainstreaming campaigns and inclusivity in the public sector.

Table 4.4: Distribution by Gender

Gender Distribution	Frequency	Percentage %
Male	103	65
Female	55	35
Total	**158**	100

4.4.3 Education Level

The respondents were asked to indicate their highest level of education. The findings are as indicated on Table 4.5.

Table 4.5: Distribution by Education Level

Education Level	Frequency	Percentage %
Degree	91	58
Master	67	42
Total	**158**	**100**

From table 4.5, majority of the respondents indicated that they have degree level of education. This is represented by 58%. A sizeable number of the respondents (42%) cited that they poses higher degree at master level. This is highly expected since the respondents are at an advanced level of management where high level of competency is required. The findings conform with the study by Hair *et al* (2019) who established that the level of education indeed influences performance of the organization. With the advance level of education from the respondents, it implies that they were well informed and were in a position to respond to research questions with ease and furnished this study with relevant information.

4.4.4 Distribution by Category of Organization

This study sought to determine the category of organization to which the respondents belonged. The findings are as indicated in table 4.6.

Table 4.6: Distribution by Category of Organization

Category	No. of Respondents	Percentage %
Executive Agencies	54	34.1
Independent Regulatory Authority	29	18.4
Research Institution/University/Tertiary	75	47.5
Total	**158**	**100.0**

The findings shows that 34.1% of the respondents belong in the Executive Agency, 18.4% belong to independent regulatory authority, while 47.5% belong to Research Institution and Tertiary institutions respectively. The three categories above (Executive Agency, Independent regulatory authority, Research Institution/University and Tertiary institutions) are used to classify service State Corporation in Kenya. The finding implied that the respondents were from the targeted departments, and were capable of providing the required information for this

study. The distribution is also good as it shows that the study collected data from across the categories making it more representative enabling the generality of the study findings.

4.4.5 Designation of Respondents

The study sought to establish the current designation of the respondents in the respective service state corporations in Kenya. This was important for determining reliability of information provided and determine whether the respondents were in a better position to provide reliable information. The findings are indicated in table 4.7.

Table 4.7: Designation in the Organization

Designation	Frequency	Percentage %
Audit Manager	55	34.8
ICT Manager	37	23.4
Procurement Manager	66	41.8
Total	**158**	**100.0**

As shown in Table 4.7 below, 34.8% of the respondents were Audit Managers, 23.4% were ICT Managers while 41.8% were Procurement Managers. This implied that majority of the respondents were senior staff and involved in the major decision on their institutions, and offered a valuable information for this study.

4.5 Descriptive Statistics

The aim of the study was to determine influence of public procurement implementation on operational Performance of Service State Corporation in Kenya. This section sought to provide descriptive statistics of various variables namely; ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices, regulatory framework and operational performance of service state corporations in Kenya. According to Sarmento and Costa (2017), descriptive statistics is the initial stage of analysis used to describe and summarize data.

The main descriptive statistics used in the study were the frequencies, percentages, means and the standard deviation. Mean is the average score of data values. A higher mean would imply that more respondents indicated the highest values in the Likert scale while a low mean would mean that more respondents indicated the least values on the Likert scale. Standard deviation is a statistical term used to measure amount variability around an average. According to Bhandari, (2020), a high standard deviation means that values are generally far from the mean, while a low standard deviation indicates that values are clustered close to the mean. This study used a five point Likert scale to collect the views from the respondents where: 1=Strongly Disagree (SD), 2= Disagree (D), 3=Neither agree Nor disagree (N), 4=Agree (A) and 5=Strongly Agree (SA).

4.5.1 Ethical Procurement Practices

The first objective of this study was to establish how implementation of ethical procurement practices influences Operational Performance of Service State Corporation in Kenya in service State Corporation in Kenya. To achieve this objective, ethical procurement practices was assessed through three main measures namely; integrity, confidentiality and fair competition. Respondents were requested to provide information regarding their respective firms on different indicators that measures the level of ethical procurement practices as analyzed in table 4.8.

Table 4.8: Descriptive Results for Ethical Procurement Practices

Statement	SD		D		N		A		SA		Mean	Std.
	F	%	F	%	F	%	F	%	F	%		
High integrity of staff reduces fraud	3	2	5	3	31	20	59	37	60	38	4.08	0.908
Confidentiality is maintained in procurement process	3	2	13	8	52	33	54	34	36	23	3.68	0.969
In all matters relating to the procurement work, fair competition is observed.	2	1	5	3	36	23	59	37	56	35	4.04	0.884
Management frequently organizes training to improve competence level for procurement staff.	4	2	11	7	64	41	62	39	17	11	3.50	0.865

Respondents were asked to give their view on whether Integrity among procurement staff significantly reduces fraudulent activities in procurement: Majority of the respondents 60(38%) strongly agreed, 59 (37%) agreed, 31(20%) neither agreed nor disagreed, while 5(3%) disagreed and 3(2%) strongly disagreed with the statement on integrity. This was represented by a mean of 4.08 and a standard deviation of 0.908. This study finding is an indication that Procurement staff uphold integrity in undertaking their duties. This finding conforms with a research by Fourie, (2017) which found that public ethics and integrity are essential in maintaining trust and are a key cornerstone of good governance that transcend conventional public administration. This finding is also in agreement with Huberts, (2018), who concluded that integrity is a crucial concept for understanding of good governance. According to CIPS, (2013), integrity in the context of public procurement implies that procurement procedures are transparent and promote fair and equal treatment for bidders and where bad performance is identified especially where it concerns conduct that violates minimum standards then it should be addressed as a priority

To determine whether confidentiality is maintained in procurement process; Majority of the respondents 54(34%) agreed that confidentiality is practiced at all times during the procurement process, 52(33%) neither agreed nor disagreed, 36(23%) strongly

agreed while 13(8%) disagreed and 3(2%) strongly disagreed with the statement on confidentiality. This is represented by a mean of 3.68 and a standard deviation of 0.969. The finding of this study correlates with the study by Sengbeh, (2015) which revealed that confidentiality is a procurement process that ensures success as there will be limited disclosure of information. This finding also corresponds with the requirement of the Public Procurement and Asset Disposal, 2015 Section 67(1) which states that ` During or after procurement proceedings, no procuring entity and no employee or agent of the procuring entity or member of a board or committee of the procuring entity shall disclose; information relating to a procurement whose disclosure would impede law enforcement or whose disclosure would be in public interest and also information relating to procurement whose disclosure would prejudice legitimate commercial interests or inhibit fair competition.

On the statement whether fair competition is observed in all matters relating to procurement work, majority of the respondents 59(37%) agreed with the statement on fair competition, 56(35%) strongly agreed, 36(23%) neither agreed nor disagreed, 5(3%) disagreed while 2(1%) strongly disagreed with the statement on fair competition. This is represented by a mean of 4.04 and a standard deviation of 0.884. This is an indication that fair competition is practiced in service state corporations in Kenya. This finding corresponds with the UK Public Procurement Directive 2014/24 which document that contact descriptions must be non-discriminatory. The finding relate with a study by Syne (2017) on social equity in Public Procurement which found that, in order to remedy potential market failures, procurement industry must take active measures to ensure there is a more equitable and competitive markets .

 Respondents were asked to give their view on whether `Management frequently organizes training to improve competence level for procurement staff``. Majority of the respondents 64(41%) neither agreed nor disagreed with the statement on staff training, 62(39%) agreed, 17(11%) strongly agreed while 11(7%) disagreed and 4(2%) strongly disagreed with the statement on training. This was represented by a mean of 3.50 and a standard deviation of 0.865. This is an indication that management of service state cooperation in Kenya do not frequently organize training for procurement staff to improve on their competency level. The findings

coincide with the study by Ndumbi and Okello (2015) which revealed that the procurement work force in parastatals in Kenya was not adequately trained hence exposing procurement process to consequences including risks of breach of purchasing contracts. The study findings also relate with a study by Babagana and Inuwa (2018), where majority of the respondents strongly disagreed that staff undergo training regularly.

The findings imply that the implementation of ethical procurement practices improve the performance of services state corporations in Kenya as summarized in table 4.8. This echoes the findings of Haron and Mahzan, (2019), who established that implementing ethics in procurement process reduces unethical behavior which could deteriorate image of the company. According to, Cheporiot *et al* (2018), ethical process help management in proper decision making when faced with ethical dilemma. Ndolo and Njagi (2014) found out that the more ethical process by companies, the better the effectiveness of the procurement process leading to satisfaction of customers. A study by Maria *et al*, (2018) found that, by practicing procurement ethics, organizations avoid litany of unethical issues such as collusion with suppliers, conflict of interest and compromise to procurement decision.

4.5.2 Descriptive Statistics for Tender Evaluation Process

The second objective was to determine the influence of Tender Evaluation Process on Performance of Service State Corporation in Kenya in service state corporations in Kenya. To achieve this objective, Tender Evaluation Process was assessed through three main measures namely Tender Opening, tender evaluation process and Tender Award. The respondents were requested to indicate their level of agreements on specific statements regarding Tender Evaluation Process. The findings are indicated in table 4.9.

Table 4.9: Descriptive Results for Tender Evaluation Process

Statement	SD F	%	D F	%	N F	%	A F	%	SA F	%	M	Std.
The agency has adopted e-Tender Evaluation Process which it uses in the opening of bids and tender evaluation	9	5	23	15	52	33	51	32	23	15	3.44	1.060
Scoring method is developed for technical evaluation of bids	0	0	5	3	27	17	69	44	57	36	4.10	0.804
Financial evaluation is based on Prevailing Market price and total cost of ownership	10	6	15	9	55	35	50	32	28	18	3.55	1.051
There is openness in the tender award	0	0	6	4	38	24	69	44	45	28	3.95	0.816

To determine whether the agencies have adopted e-Tendering Process `. Majority of the respondents 52(33%) neither agreed nor disagreed with the statement on e-Tender Evaluation Process being adopted by the state agencies. 51(32%) agreed with the statement, 23(15%) strongly agreed, while 23(15%) disagreed and 10(6%) strongly disagreed with the statement on adoption of e-Tender Evaluation Process by the service state corporations in Kenya. This was represented by a mean of 3.44 and a standard deviation of 1.060. This implies that most of the service state corporations in Kenya have not embraced e-tendering process. The study finding relate with a study by Gichuhi and Waruguru (2020) who found that, despite the importance of e-tendering, Geothermal Development Company had not adopted its usage and therefore was still using the traditional and manual methods of tendering. According to Alyahya and Panuwatwanich (2018), barriers to proper implementation of e-Tender Evaluation Process includes lack of top management support, lack of Infrustructure in Information Technology (IT), costly IT systems, lack of technical expertise and insecurities in online transactions.

Respondents were asked to give their views whether Scoring method is developed for technical evaluation of bids. Majority of the respondents 69(44%) were in agreement with the statement on technical evaluation, 57(36%) strongly agreed, 27(17%) neither agreed nor disagreed with the statement on technical evaluation

while 5(3%) disagreed. None strongly disagreed with the statement on technical evaluation. This study conforms with the research by Duda, (2016) which states that the evaluation committee most often uses the scoring method for technical evaluation. According to World Bank (2016), The Qualifying criteria during the technical evaluation should be stated in such a way that an assessment can determine whether the Bid/Proposal is substantially responsive to the technical and commercial requirements.

On the statement whether Financial evaluation is based on Prevailing Market price and lifecycle costing `. Majority of the respondents 55(35%) neither agreed nor disagreed, 50(32%) of the respondents agreed, 28(18%) strongly agreed while 15(9%) disagreed and 10(6%) strongly disagreed with the statement on market survey. This was represented by a mean of 3.55 and a standard deviation of 1.051. This is an indication that service state corporation do not to a great extent undertake market survey to inform their purchase decisions. According to a study by Prajapati and Pitroda (2015) , one of the most important decision that have to be done by any contractor competing in the market, is which price to bid for when a serious invitation has been received. A study by Heralova, (2019) document that cost estimation through lifecycle costing methods could be helpful in quantification of construction projects. According to Aden, *et al,* (2016), one of the basic rules of procurement is that in the end, it is important to think in terms of the total cost of ownership, which do not only include the purchase price, but also time and resources that are expended in the pursuit of the ownership.

To determine whether there is openness during tender award, majority of the respondents 69(44%) agreed with the statement, 45(28%) strongly agreed , 38(24%) neither agreed nor disagreed while, 6(4%) disagreed with the statement. None of the respondents strongly disagreed. This was represented by a mean 3.96 and a standard deviation of 0.816. The above result is an indication that service state corporations practice the standard procedure of transparency as required in the public procurement policy. These findings are in agreement with a study by Afoakwa, (2014) on relevance of transparency in public procurement which states that the principles of transparency has been shown to be relevant in the process of acquiring goods,

services and works as a function of modern governance. These study findings also support the findings of the study by Puddephatt and Kasper (2016) which acknowledged that openness can improve access to public procurement opportunities through disclosure, publication and dissemination of information on available tenders.

The results were a clear indication that implementation of Tender Evaluation Process are significant in the performance of services state corporations in Kenya. According to Diabagate *et al* (2014), the analysis and evaluation stage ad is very important in the process of tendering. Posit that, in terms of rules and regulations, the most important thing which need to be done immediately is the synchronization of all rules applied during the bidding process so that the rules used are clear throughout the process. Plebankiewics and Kozic (2017), noted that using non-price criteria in the evaluation process involves the necessity on part of the contracting authority to indicate the methods of tender evaluation by means of individual criteria, and if possible, a specific definition of what the contracting will award points for and in what amount. Oad *et al* (2021) ,noted that choosing a contractor for a construction project can be highly challenging, particularly in the context of evaluating innovation in the road construction industry.

4.5.3 Descriptive Statistics for Procurement Records Management

The third objective was to examine the influence of procurement records management on Performance of Service State Corporation in Kenya in service state corporations in Kenya. To achieve this objective, procurement records management was assessed through three main measures namely; Records Creation, Records maintenance and encryption, and Records access and use. The respondents were requested to indicate their level of agreements on specific statements regarding procurement records management. The findings are indicated in table 4.10.

Table 4.10: Descriptive Statistics for Procurement Records Management

Statement	SD		D		N		A		SA		M	SD
	F	%	F	%	F	%	F	%	F	%		
Procurement records are created, filed and are easily accessed	0	0	0	0	27	17	92	58	40	25	4.06	0.654
Procurement records are maintained and encrypt for safety purposes	4	2	15	9	32	20	80	51	27	17	3.69	0.961
Staff in charge of procurement records are trained to increase capacity on modern record keeping techniques	2	1	13	8	70	44	58	37	15	9	3.45	0.822
Records maintained in accordance with ISO 15489 Compliance which is an international standard for information and documentation	2	1	5	3	38	25	83	54	30	20	3.94	0.694

Respondents were asked to give their view on whether procurement records are created, filed and are easily accessed. Majority of the respondents 92(58%) agreed that proper filing is done and can be retrieved to facilitate audit trails, 40(25%) strongly agreed, 27(17%) neither agreed nor disagreed with the statement on records filing. The finding is represented by a mean of 4.06 and standard deviation of 0.654. This finding corresponds to a study by Bunawan et al, (2016), which states that proper documentation can solve issues on inappropriate management towards an organization material as well as losing important information. This finding concur with the study by Randle *et al,* (2017) which states that adequacy of audit trails, including changes to vendor records, is critical in helping to confirm the authenticity and integrity of transactions.

Concerning whether data encryption is done for file safety`, majority of the respondents 80(51%) agreed with statement, 32(20%) neither agreed nor disagreed, 27(17%) strongly agreed, while 15(9%) disagreed and 4(2%) strongly disagreed with statement on data encryption. This is represented by a mean of 3.65 and a standard deviation of 0.961. The study findings are in agreement with a research carried out by Chen and Wu (2016) which documents that data encryption is one way of enhancing information confidentiality and government information security. The study also conform with the finding by Gong *et al* (2017), who states that, data encrypting do not only solve the key management problem but also ensures integrity and non-repudiation of the data.

To determine whether staff in charge of records trained, majority of the respondents 70(44%) neither agreed nor disagreed with the statement that staff training, 58(37%) agreed, 15(9%), while 13(8%) disagreed and 2(1%) strongly disagreed with statement on training. This is represented by a mean of 3.45 and a standard deviation of 0.822. This study finding corresponds with research by Tuhmuhairwe & Ahimbisibwe (2016) which acknowledged that issues related to professional qualification and training affects records management performance in public procurement entities.

Concerning the statement on whether records are managed in accordance with ISO 15489`, majority of the respondents 83(54%), agreed, 38(25%) neither agreed nor disagreed with the statement on ISO 15489 compliance, 30(20%) strongly agreed while 5(3%) disagreed and 2(1%) strongly disagreed. This finding is represented by a mean of 3.94 and a standard deviation of 0.694. This study finding is correspond with research findings by Chiwanza & Tsvuora (2012) which document that ISO 15489-1 which is a records management system act as a source of information about business activities and can be used to promote accountability in business operations.

The findings were a clear indication that procurement records management enhance operational performance of service state corporations in Kenya as summarized in table 4.10. The findings compare well with that by Namukasa, (2017) who posit that if procurement is to support growth of state agencies, then proper records management must be emphasized. Afifah, (2016) found that proper records management supports decision making processes within organizations. According to Bennett (2019), defining records management best process and implementing an effective records management strategy is imperative for organizations wishing to remain compliant and avoid the potential penalties of not meeting their record-keeping obligations. Ramlee *et al*, (2018) document that, as a result of proper records management, organization would achieve good governance and accountability in their processes.

4.5.4 Descriptive Statistics for Supplier Appraisal Practices

The fourth objective was to evaluate influence of Supplier appraisal practices on Performance of Service State Corporation in Kenya in service state corporations in Kenya. To achieve this objective, Supplier appraisal practices was assessed through three main measures namely; due diligence, communication and supplier commitment. The respondents were requested to indicate their level of agreements on specific statements regarding Tender Evaluation Process. The findings are as shown in table 4.11

Table 4.11: Descriptive Statistics for Supplier Appraisal Practices

Statement	SD		D		N		A		SA		M	SD
	F	%	F	%	F	%	F	%	F	%		
Due diligence done for compliance	6	4	8	5	23	15	48	30	72	46	4.44	0.729
Suppliers are involved in Early stages of procurement to reduce defects	7	4	13	8	53	33	62	39	23	15	3.51	0.981
There is good communication with suppliers	6	4	5	3	19	12	70	44	58	37	4.22	0.717
Suppliers financial capacity analyzed	1	1	1	1	16	10	62	39	78	49	4.36	0.719
Suppliers show commitment to contract	8	5	6	4	37	23	64	41	43	27	4.36	0.769

On the statement` due diligence done for compliance`, majority of the respondents 72(46%) strongly agreed with the statement, 48(30%) agreed, 23(15%), while 8(5%)disagreed and 6(4%) strongly disagreed. This is represented by mean of 4.44 and a standard deviation of 0.729. This is an indication that suitability of supplier performance is given priority by state agencies in Kenya. The findings concur with a study done by Koker and Harwood (2015) on supplier selection which documents that, due diligence check is carried out to support to the integrity of the procurement process by baring unscrupulous suppliers from accessing and abusing public procurement. The finding also aligns to a study by Uludag (2013), which states that due diligence is performed to provide useful insight information about the target company and it reveals the hidden facts and critical issues.

On the statement whether suppliers are involved in early stages of procurement, majority of the respondents 62 (39%) agreed with the statement, 53(33%) neither agreed nor disagreed, 23(15%) strongly agreed while 13(8%) disagreed and 7(4%) strongly disagreed. This is represented by a mean3.51 of and a standard deviation of 0.981. This finding correspond with the findings by Baily *et al* (2015) which documents that there are many potential benefits to the buying concern if the supplier is brought on board at an early stage. The study also observed from the findings that

a high number of respondents (33%) neither agreed nor disagreed with the statement that service state corporations engage suppliers at initial stages of procurement process. This is an indication that some service state agencies do not involve supplier at early stage of procurement. This observation relates to a study by Merilainen, (2018) on `Development of Early Supplier Involvement (ESI) process` which found out that Early Supplier Involvement (ESI) was not taken into account as a major sub process in the product conceptualization phase

Regarding statement of `good communication with supplier`, majority of the respondents 70(44%) agreed with the statement, 58(37%) strongly agreed, 19(12%) neither agreed nor disagreed, 5(3%) disagreed and 6(4%) strongly disagreed with statement on communication. This is represented by a mean of 4.22 and a standard deviation of 0.717. This finding corresponds with the study by Lotfi *et al*, (2013) which asserts that information sharing brings a significant advantage to production firms in terms of; expanded network, reduction of uncertainties, efficient inventory management and reduced cycle time from order to delivery. The study also correlate with a research done by Nawi *et al* (2017) which acknowledged that communication is key between the purchasing department and suppliers for feedback purposes and that suppliers can also allow organization to modify products to suit their needs.

On the statement `Suppliers financial capacity analyzed`, majority of the respondents 78(49%) strongly agreed with the statement, 69(39%) agreed, 16(10%) neither agreed nor disagreed with the statement. While 1(1%) disagreed and 1(1%) strongly disagreed. This is represented by a mean 4.36 of and a standard deviation of 0.719. This finding is a strong indication that supplier capacity to perform is given priority before being engaged in any form of contract or agreement. The findings correspond with a study by Wachiuri, (2020) which revealed that there is a positive and significant relationship between supplier capacity and performance of state corporations in Kenya. According to (CIPS, 2013), financial status of a supplier are measured by factors such as profitability, sales turnover, value of capital asset and the scale of borrowing hence need to be evaluated at the earliest stages of supplier appraisal.

The study sought to assess whether supplier show commitment to contracts. Majority of the respondents 64(41%) agreed with the statement, 43(27%) strongly agreed, 37(23%) neither agreed nor disagreed and 8(5%) strongly disagreed with statement on supplier commitment. This is represented by a mean of 4.36 and a standard deviation of 0.769. The finding of the study correlate with the findings of a study by Haghkhaha *et al,* (2013) who found that supplier commitment leads to the development of stable, long-term relationships. This line of thought is shared by Kimario *et al* (2021) which states that commitment between purchasers and suppliers bring the aspiration to develop stable relationship. Lel and Kwasira (2019) found that supplier quality commitment has a positive and a significant influence on the performance of the procurement function

The findings on supplier appraisal are in tandem with Pikousova and Prusa (2013) who concluded that Supplier performance evaluation provides a buying firm with a quantifiable measure and thus the status of the supplier which can influence a possible relationship with the buyer. Frank and Sunitha (2021) observed that supplier appraisal is a highly critical area as poor supplier selection can lead to parts replacement and in the worst scenario can create dangerous situations. According to Stevic, (2017), it is necessary to continuously collect and process information about suppliers, to establish and maintain an adequate connection. According to Apolot, (2017), there is a need to perform supplier appraisal to ensure effective supplier performance and performance of an organization.

4.5.5 Descriptive Statistics for Regulatory Framework

The fifth objective of the study was to find out the moderating influence of regulatory framework on performance of state corporations in Kenya. The respondents were requested to indicate their levels of agreement on specific statements regarding regulatory frameworks on a five-point Likert scale. The findings are as indicated in table 4. 12

Table 4.12: Descriptive Statistics for Regulatory Framework

Statement	SD		D		N		A		SA		M	SD
	F	%	F	%	F	%	F	%	F	%		
1. Internal auditors maintains due professional care when auditing procurement processes	1	1	4	2	28	18	61	39	64	40	4.15	0.847
2. Procurement done as per procurement law	1	1	1	1	13	8	51	32	92	58	4.46	0.723
3. There is proper selection of procurement methods	5	3	9	6	47	30	63	40	34	21	3.72	0.948
4. Proper Budgeting done at the planning stage of procurement	13	8	12	8	50	32	43	27	40	25	4.08	0.863

The study sought to assess whether internal auditors maintain due professional care when auditing procurement processes. Majority of the respondents 64(40%) strongly agreed that due professional care is practiced by the internal auditors when undertaking their duties, 61(39%) agreed with the statement, 28(18%) neither agreed nor disagreed while 4(2%) disagreed and 1(1%) strongly disagreed. This is represented by a mean of 4.15 and a standard deviation of 0.847. This finding corresponds with Subiyanto, (2021) who found that auditor independence and due professional care have a substantial impact on audit efficiency. Davis *et al* (2014) observed that due professional care guarantee accountability and maintenance of competence during work

On the statement whether procurement is done as per procurement law`, majority of the respondents 92(58%) strongly agreed, 51(32%) agreed, 13(8%) neither agreed nor disagreed while 1(1%) disagreed and 1(1%) strongly disagreed with the statement on procurement law. This is represented by a mean of 4.46 and a standard

deviation of 0.723. This is an indication that service state corporations to an extent follow procurement law as required. The findings conform with requirement of the Public Procurement and Asset Disposals Regulations, (2020) which requires that national government entities to carry out public procurement activities as stipulated in the procurement law.

The study investigated whether there is proper selection of procurement methods. Majority of the respondents 63(40%) agreed with the statement, 47(30%) neither agreed nor disagreed, 34(21%) strongly agreed while 9(6%) disagreed and 5(3%) strongly disagreed. This is represented by a mean of 3.72 and a standard deviation of 0.948. The finding of the study corresponds with Bako (2016) who found out that, selection of appropriate procurement method should be one which will be suitable to the project at hand. This is because individual projects have different attributes and each procurement method has its own particular terms and conditions.

On the statement `proper budgeting done to at the planning stage of procurement, majority of the respondents neither 50(32%) neither agreed nor disagreed with the statement, 43(27%) agreed, 40(25) strongly agreed, 12(8%) while 13(8%) strongly disagreed with the statement on budget. The findings of this study relate to the study findings by Kamau *et al* (2017) which revealed that budget proposals by Kenyatta National Hospital staff are not taken seriously**.** From the analysis of table 4.12, the results clearly indicated that regulatory framework is a good moderator of the operational performance of service state corporations in Kenya. The findings correlate with that of Mustaev *et al,* (2019) which states that compliance with the requirements of the standards significantly improves the quality and effectiveness of the functioning of the enterprise. A study by Karungani and Ochiri, (2017) concluded that indeed, policy and regulatory framework within the procurement sector plays a very important role in improving organizational performance.

4.5.6 Descriptive Statistics for Operational Performance of Service State Corporation in Kenya

The study sought to find out operational performance of Service State Corporation in Kenya as the dependent variable for the study. The main measures used to unveil

operational Performance of Service State Corporation in Kenya included; sound procurement, access to procurement records, fair competition, cost reduction, and transparency. The respondents were asked to rate performance of their respective institutions based on these performance indicators. The findings based on these measures are shown in table 4.13.

Table 4.13: Descriptive Results for Operational Performance of Service State Corporation in Kenya

Statement	SD		D		N		A		SA		M	SD
	F	%	F	%	F	%	F	%	F	%		
Sound procurement practiced	0	0	0	0	22	14	66	42	70	44	4.33	0.695
There is ease of access to procurement records	0	0	1	1	20	13	94	59	43	27	4.12	0.636
Fair competition to all bidders	0	0	8	5	18	11	78	49	54	34	4.15	0.746
Quality products and services realized	0	0	1	1	22	14	64	40	71	45	4.29	0.727
purchasing cost reduction is achieved	5	3	4	2	76	48	41	26	32	20	3.80	0.888
There is transparency in procurement process	4	3	5	3	35	22	76	48	38	24	3.97	0.765

The study sought to assess whether sound procurement is practiced. Majority of the respondents 70(44%) strongly agreed with the statement, 66(42%) were in agreement, and 22(14%) neither agreed nor disagreed with the statement on sound procurement. This is represented by a mean of 4.33 and a standard deviation of 0.695. This finding concurs with a study by Ogulin (2014) where many respondents argued that the process of supply chain alignment resulted in better coordination of physical movements within the supply chain; better coordination of decision making; better price coordination; increased responsiveness of procurement staff; improved inventory holding polices, and less waste.

Concerning whether there is ease of access to procurement records, majority of the respondents 94(59%) agreed with the statement, 43(27%) strongly agreed, 20(13%) neither agreed nor disagreed while 1(1%) disagreed. There was no respondent who

strongly disagreed with the statement. This is represented by a mean of 4.12 and a standard deviation of 0.636. According to Matto, (2018), without access to records, the public does not have the evidence needed to hold officials accountable or to hold officials accountable or to insist on the prosecution of corruption or fraud, which directly affects performance of procurement.

On the statement whether fair competition in procurement is practiced, majority of the respondents 78(49%) agreed with the statement, 54(34%) of the respondents strongly agreed, 18(11%) neither agreed nor disagreed while 8(5%) disagreed with the statement. None of the respondents strongly disagreed with the statement on fair competition. This is represented by a mean of 4.15 and a standard deviation of 0.746. This findings corresponds with Thuo and Njeru (2014) on effects of public procurement reforms on service delivery, where majority of the respondents agreed that fair competition results into quality and efficient service delivery.

Respondents were asked to give their view on whether quality of products and services are realized. Majority of the respondents 71(45%) of the respondent strongly agreed with the statement, 64(40%) of the respondents agreed, 22(14%) neither agreed nor disagreed and 1(1%) disagreed. None of the respondents strongly disagreed with the statement on quality. This is represented by a mean of 4.29 and a standard deviation of 0.727. This finding correlate with a study by Kingi and Mwangangi, (2017), who revealed that good quality control helps companies meet customers' demands for better products on quality.

Respondents were asked to give their view on whether cost reduction in purchasing is achieved. Majority of the respondents 76(48%) neither agreed nor disagreed with the statement on cost reduction, 41(26%) of the respondents agreed, 32(20%) strongly agreed while 4(2%) disagreed and 5(3%) strongly disagreed. This is represented by a mean of 3.80 and a standard deviation of 0.880. From this finding, it is an indication that cost reduction is not absolutely achieved by service State Corporation in Kenya, hence no value for money. As noted by Asare *et al* (2016), Value for money in public procurement help pursue the lowest whole of life cost of a product, fosters competition and prevents unnecessary wastage of resources

On the statement whether there is transparency in procurement process, majority of the respondents 76(48%) agreed that transparency is practiced, 38(24%) strongly agreed, 35(22%) neither agreed nor disagreed while 5(3%) disagreed and 4(3%) strongly disagreed with the statement on transparency in contract award. This study is in line with a study by Beer *et al* (2021) which documents that Transparency in procurement processes and procedures is necessary for openness, competitiveness, accessibility of information, prevent favoritism and corruption**.**

4.6 Confirmatory Factor Analysis

Factor analysis as a dimension reduction technique was conducted to retain the smallest number of factors that had the highest influence in terms of the total variance explained. Factor analysis was conducted through Principle component analysis. Before conducting principle component analysis a number of conditions were satisfied. These included; setting the level of measurement to ordinal, having a sample size variables ratio of at least 5:1, ensuring presence of substantial correlations greater than 0.30 between variables included in the analysis, having Kaiser-Olkin measure of sampling adequacy (KMO-MSA) greater than 0.50 for each individual variable as well as for the set of variables, and having the probability associated with the Bartlett test of sphericity less than the level of significance set for the study.

4.6.1 Factor Analysis for Ethical Procurement Practices

The variable ethical procurement practices was set to be measured using six statements which covered all its dimensions in order to identify and retain variables with a high statistical significant influence and which could explains most of the information on purchasing ethics two iterations. In the first iteration, the variable had a KMO value of .655 and Bartlett's test with chi-square value of 46.642 significant (.000) at 15 degrees of freedom. All statements had high communalities ranging from .632 to .873 extracting two components with eigenvalues greater than 1 having a total variance explained of 76.419. To reduce the number of components extracted from two to one, a component matrix analysis was done where statement one and two loaded on component two whereas statement 3-6 loaded on component one.

Therefore statement 1 and 2 were removed and the questionnaire part for ethical procurement practices was left with four statements with the following statistics below.

Table 4.14: KMO and Bartlett's Test for Ethical Procurement Practices

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.804
	Approx. Chi-Square	28.976
Bartlett's Test of Sphericity	Df	6
	Sig.	.000

Table 4.14 shows the results for the KMO and Bartlett's test of sphericity which were obtained for purchasing ethics. The results show that the remaining four statements used to measure the factor purchasing ethics had a KMO value higher than the recommended value of 0.50 and a significant chi-square value for Bartlett's test of sphericity at 6df. Table 4.10 below shows total variance explained for ethical procurement process

Table 4.15: Total Variance Explained for Ethical Procurement Process

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.762	69.052	69.052	2.762	69.052	69.052
2	.540	13.489	82.542			
3	.393	9.826	92.368			
4	.305	7.632	100.000			

Extraction Method: Principal Component Analysis.

Table 4.15 shows the total variance explained by the four statements for ethical procurement practices. Based on eigenvalues; the four statements left in the questionnaire extracted one component and could explain a cumulative value of 69.052% of total variance in this variable. The total variance explained by the statements was considered high and adequate for data collection.

4.6.2 Factor Analysis for Tender Evaluation Process

The variable tender evaluation process was set to be measured using six statements which covered all its dimensions in order to identify and retain statements with a high statistical significant influence and which could explains most of the information on value for money iterations. In the first iteration, the variable had a KMO value of .735 and Bartlett's test with chi-square value of 66.382 significant (.000) at 15 degrees of freedom. All statements had communalities ranging from .586 to .840. These statements extracted two components with eigenvalues greater than 1 having a total variance explained of 75.648. Statement 3 loaded on component 2 whereas others loaded on component 1. It was therefore removed. On removal remaining statements had higher communalities apart from 5 which had .481 but all loaded on one component. Statement 5 was removed and the questionnaire remained with four statements with the following statistics.

Table 4.16: KMO and Bartlett's Test for Tender Evaluation Process

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.797
	Approx. Chi-Square	42.081
Bartlett's Test of Sphericity	df	6
	Sig.	.000

Table 4.16 shows the results for the KMO and Bartlett's test of sphericity which were obtained for tender evaluation process. The results shows that the remaining four statements used to measure the factor tender evaluation process had a KMO value higher than the recommended value of 0.50 and a significant chi-square value for Bartlett's test of sphericity at 6df. Table 4.12 shows total variance explained for tender evaluation process.

Table 4.17: Total Variance Explained for Tender Evaluation Process

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.015	75.381	75.381	3.015	75.381	75.381
2	.467	11.682	87.063			
3	.352	8.797	95.860			
4	.166	4.140	100.000			

Extraction Method: Principal Component Analysis.

Table 4.17 shows the total variance explained by the four variables for tender evaluation process. Based on eigenvalues, the four statements left in the questionnaire extracted one component, tender evaluation process, and could explain a cumulative value of 87.063% of total variance in this variable. The total variance explained by the statements was considered high and adequate for data collection

4.6.3 Factor Analysis for Procurement Record Management

The variable procurement record management was set to be measured using six statements which covered all its dimensions in order to identify and retain variables with a high statistical significant influence and which could explains most of the information on procurement records management two iterations. In the first iteration, the variable had a KMO value of .666 and Bartlett's test with chi-square value of 31.167 significant (.000) at 6 degrees of freedom. The variables had communalities ranging from .489 to .786. Statement 2 had a communality of .489 which was less than .50 meaning that it had to be removed. These variables extracted two components with eigenvalues greater than 1 having a total variance explained of 65.197. On assessment of component rotation, statement 1 loaded on component 1 and 2 meaning it had a complex structure. On second iteration, these two statements were removed and the questionnaire structure for the procurement record management remained with the following statistics.

Table 4.18: KMO and Bartlett's Test for Procurement Record Management

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.613
Bartlett's Test of Sphericity	Approx. Chi-Square	21.306
	df	6
	Sig.	.002

Table 4.18 shows the results for the KMO and Bartlett's test of sphericity which were obtained for procurement records management. The results show that the remaining four variables used to measure the factor procurement record management had a KMO value higher than the recommended value of 0.50 and a significant chi-square value for Bartlett's test of sphericity at 6df. Table 4.14 below show total variance explained for procurement records management.

Table 4.19: Total Variance Explained for Record Management

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.430	60.742	60.742	2.430	60.742	60.742
2	.987	24.666	85.408			
3	.420	10.498	95.906			
4	.164	4.094	100.000			

Extraction Method: Principal Component Analysis.

Table 4.19 shows the total variance explained by the four variables for value for money Based on eigenvalues, the four statements left in the questionnaire extracted one component, procurement record management, and could explain a cumulative value of 79.910% of total variance in this variable. The total variance explained by the statements hwas considered high and adequate for data collection. Table 3.8 shows the total variance explained by the four variables for value for money

4.6.4 Factor Analysis for Supplier Appraisal Practices

The variable supplier appraisal practices was set to be measured using six statements which covered all its dimensions in order to identify and retain variables with a high statistical significant influence and which could explains most of the information on

supplier performance appraisal iterations. In the first iteration, the variable had a KMO value of .566 and Bartlett's test with chi-square value of 44.512 significant (.000) at 15 degrees of freedom. All statements had communalities ranging from .492 to .913. Statements 1 had communality of .492 which was less than the recommended .50. These variables extracted two components with eigenvalues greater than 1 having a total variance explained of 68.095%. Since statement 1 had communality less than .50, it was removed in the second iteration resulting in the extraction of one component with eigenvalues greater than 1 and having a variance explained of 58.183%. This resulted in the questionnaire part for supplier appraisal practices remaining with five statements with the following statistics.

Table 4.20: KMO and Bartlett's Test for Supplier Appraisal Practices

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.697
	Approx. Chi-Square	34.164
Bartlett's Test of Sphericity	Df	10
	Sig.	.000

Table 4.20 shows the results for the KMO and Bartlett's test of sphericity which were obtained for supplier appraisal. The results show that the remaining five variables used to measure the factor supplier performance appraisal had a KMO value higher than the recommended value of 0.50 and a significant chi-square value for Bartlett's test of sphericity at 6df. The table 4.16 shows total variance explained for supplier appraisal practices

Table 4.21: Total Variance Explained for Supplier Appraisal

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.909	58.183	58.183	2.909	58.183	58.183
2	.859	17.176	75.359			
3	.687	13.744	89.103			
4	.300	5.999	95.102			
5	.245	4.898	100.000			

Extraction Method: Principal Component Analysis.

Table 4.21   shows the total variance explained by the five statements for supplier performance appraisal Based on eigenvalues, the five statements left in the questionnaire extracted one component, Supplier appraisal Practices, and could explain a cumulative value of 60.742% of total variance in this variable. The total variance explained by the statements was considered high and adequate for data collection.

4.6.5 Factor Analysis for Regulatory Framework

The variables regulatory framework was set to be measured using six statements which covered all its dimensions in order to identify and retain variables with a high statistical significant influence and which could explains most of the information on Regulatory Framework`s iterations. In the first iteration, the variable had a KMO value of .599 and Bartlett's test with chi-square value of 93.108 significant (.000) at 15 degrees of freedom. All statements had communalities ranging from .690 to .873 which extracted two components having eigenvalues greater than 1 with a total variance explained of 83.088. Variable 1 and 5 loaded on component two while the rest were loading on component 1. These were removed and the resulting questionnaire part for regulatory framework remained with four statements with the following statistics.

Table 4.22: KMO and Bartlett's Test for Regulatory Framework

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.650
Bartlett's Test of Sphericity	Approx. Chi-Square	79.397
	Df	6
	Sig.	.000

Table 4.22 shows the results for the KMO and Bartlett's test of sphericity which were obtained for purchasing ethics. The results show that the remaining four variables used to measure the factor purchasing ethics had a KMO value higher than the recommended value of 0.50 and a significant chi-square value for Bartlett's test of sphericity at 6df. Table 4.18 below show total variance explained for regulatory framework

Table 4.23: Total Variance Explained for Regulatory Framework

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.468	86.688	86.688	3.468	86.688	86.688
2	.266	6.653	93.341			
3	.223	5.571	98.913			
4	.043	1.087	100.000			

Extraction Method: Principal Component Analysis.

Table 4.23 shows the total variance explained by the four variables for regulatory framework. Based on eigenvalues, the four statements left in the questionnaire extracted one component, regulatory framework, and could explain a cumulative value of 86.688% of total variance in this variable. The total variance explained by the statements was considered high and adequate for data collection

4.6.6 Factor Analysis for operational Performance of Service State Corporations in Kenya

The variable operational performance of service state corporations in Kenyan was set to be measured using six statements which covered all its dimensions in order to identify and retain variables with a high statistical significant influence and which could explains most of the information on performance of procurement function. On first iteration all the six statements extracted one component. Therefore the resulting questionnaire part for operational performance of service state corporations in Kenya had all the six statements included with the following statistics.

Table 4.24: KMO and Bartlett's Test for Operational Performance of Service State Corporations in Kenya

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.823
Bartlett's Test of Sphericity	Approx. Chi-Square	139.608
	df	15
	Sig.	.000

Table 4.24 shows the results for the KMO and Bartlett's test of sphericity which were obtained for operational performance of service state corporations in Kenya.

The results show that all the six statements used to measure the factor operational performance of service state corporations in Kenya had a KMO value higher than the recommended value of 0.50 and a significant chi-square value for Bartlett's test of sphericity at 6df. Table 4.20 below total variance explained for operational performance of service state corporations in Kenya.

Table 4.25: Total Variance Explained for Operational Performance of Service State Corporations in Kenya

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.961	82.684	82.684	4.961	82.684	82.684
2	.528	8.792	91.476			
3	.249	4.157	95.634			
4	.179	2.979	98.613			
5	.056	.935	99.547			
6	.027	.453	100.000			

Extraction Method: Principal Component Analysis.

Table 4.20 shows the total variance explained by the four variables for performance of procurement function. Based on eigenvalues, the six statements extracted one component, operational performance of services state corporations in Kenya, and could explain a cumulative value of 82.684% of total variance in this variable. The total variance explained by the statements was considered high and adequate for data collection.

4.7 Diagnostic Tests

The study conducted diagnostic tests that included normality test, homoscedasticity test, multicollinearity test and autocorrelation test. The tests were conducted to establish whether the data collected was accurate, reliable and capable of inferring the study results to the target population.

4.7.1 Normality Test

Normality of data is performed in research to test the normal distribution for the responses in a study. Mishra *et al*, (2019). In this study, Normality of data were tested with formal test using Kolmogorov-Smirnov and Shapiro-Wilk tests, as indicated in Table 4.19.

Table 4.26: Normality Test Table

	Kolmogorov-Smirnov[a]			Shapiro-Wilk			Kurtosis	Skewness
	Df	Sig.	Statistic	df	Sig.			
Ethical procurement practices	.082	158	.230	.969	158	.170	-.686	.202
Tender Evaluation Process	.101	158	.210	.973	158	.182	.-587	.316
Procurement records management	.077	158	.190	.979	158	.160	-.553	.066
Supplier Appraisal	.112	158	.160	.965	158	.172	-.364	.382
Regulatory Framework	.083	158	.220	.983	158	.162	-.233	.154
Performance of Service State Corporations innProcurement Function	.107	158	.210	.971	158	.190	-.297	.441

a. Lilliefors Significance Correction

 Initial tests on the variables indicate violation of normality; hence, all the independent variables had to be transformed first to remove the outliers that were observed in the original data. Outliers are observations showing characteristics or values that are marked differently from majority of cases in a data set hence should be removed (Gilbert *et al*, 2020).

The study conducted normality test at 95% confidence interval for mean, where the p value was either compared to determine whether data was normally distributed (greater 0.05) or not normally distributed (less than 0.05). As observed in table 4.14, the p-value for the test were greater than 0.05. This is an indication that the residuals were normally distributed and the assumption of normality was satisfied. This finding corresponds to the study by Mudi, (2020) who observed that data is normally

distributed when p value is greater than 0.05. The study also correlate with a research by Das and Imon (2016) who observed that data is normally distributed when p value is greater than 0.05.

4.7.2 Test for Multicollinearity

Multicollinearity is the degree of correlation between independent variables (Daoud, 2017). Tests which are done to determine multicollinearity include t ratios, and the use of Variance inflation Factor (VIF). This study employed the use of Variance Inflation Factor (VIF) and t-ratios to determine multicollinearity. From the table 4.15 below, although the tolerance values of the variables are lower than 1.00, the values of the reciprocal of tolerance, which is, Variance Inflation Factor (VIF), are less than 5 indicating that there is no Multicollinearity among the explanatory variables.

Table 4.27: Table for Multicollinearity Test

Model	Unstandardized			t	Sig	Collinearity Statistics	
						tolerance	VIF
(Constant)	.352	.068		1.514	.132		
Ethical procurement practices	.009	.068	.010	.137	.891	.389	2.571
Tender Evaluation Process	.176	.059	.222	2.968	.003	.385	2.598
Procurement records management	.176	.061	.166	2.865	.005	.638	1.568
Supplier appraisal practices	.196	.076	.185	2.568	.011	.413	2.422
Regulatory Framework	.389	.056	.425	6.917	.000	.569	1.759

a. Dependent Variable: Performan

4.7.3 Heteroskedasticity Test

Homoscedasticity indicates that all the error terms of a regression function have the same variance (Klein *et al* 2016). The opposite of homoscedasticity, were the variance varies from observation to observation is called Heteroskedasticity where there is unequal or no constant variance. This study used the Breush-pagan test for Heteroskedasticity. The Breusch-Pagan test shows a chi-square value and a significance value for the independent variables. In computation of the Breusch-pagan test score, the predicted value of the regression between the variables is by

computing the unstandardized residuals and predicted values, and the sum of squared residuals. The squared residuals are then divided by the sum of the squared and the number of observations and regressed against the predictive values to give the Breush-pagan test score and it's P-value against the number of degrees of freedom. A p-value less than 0.05 indicate that there is Heteroskedasticity while a p-value greater than 0.05 indicates Heteroskedasticity does not exist. Table 4.16 shows the results obtained from running the tests.

Table 4.28: Breush-Pagan Test for Heteroscedasticity

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	5.431	5	1.086	4.287	.092[b]
1	Residual	1.014	4	.253		
	Total	6.444	9			

a. Dependent Variable: Operational performance of service state corporations in Kenya
b. Predictors: (Constant), Ethical procurement practices, Tender Evaluation Process, Procurement records management, supplier appraisal practices, Regulatory Framework

The results in the table shows the Breush-pagan test score, which are represented by the regression sum of squares or the mean square value is 1.086. The p-value for the regression is 0.086 at 1 degree of freedom. This P-value is greater than the standard P-value 0.05 which indicates that heteroscedasticity does not exist among the variables selected for this study thus the assumption had not been violated.

4.7.4 Autocorrelation Test

To determine Autocorrelation the Durbin Watson d test is the most celebrated measure. This test is simply the ratio of the sum of squared differences in successive residuals to the residual sum of squares (RSS) (Sarstedt & Mooi, 2019). In testing Autocorrelation, if the computed d value in the Watson Test is closer to zero, then there is evidence of positive autocorrelation, but if the value is closer to 4, then there is evidence of negative autocorrelation. A d value closer to 2 shows more evidence of no autocorrelation. Watson and Durbin provided the lower and upper limit critical values of 1-5% as the values, which can be used to determine positive or negative

autocorrelation. The following Table shows the Durbin-Watson test for this study. The Watson and Durbin *d-value* is equal 2.878. This shows evidence of no autocorrelation.

Table 4.29: Durbin-Watson Test for Autocorrelation.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.918[a]	.843	.646	.50337	2.878

a. Predictors: (Constant), Ethical procurement practices, Tender Evaluation Process, procurement Record Process, Supplier appraisal practices, Regulatory Framework
b. Dependent Variable: Operational performance of service state corporations in Kenya

4.8 Inferential Analysis

Inferential statistical analysis involves objectively and quantitatively summarizing the data, determining which data patterns are significant, and making inferential statements about system performance. The correlation analysis and regression analysis were conducted under inferential analysis in this study. The Pearson correlation analysis was applied to examine the degree of the relationship of the variables against each other. The regression analysis was used to determine the nature of the relationship and the contribution of each independent variable in explaining the dependent variable as well as test the hypothesis of the study. The level of significance was tested at 5%.

4.8.1 Correlation Analysis of the Variables

Correlation refers to the strength of a relationship between two variables (Leavy, 2017). The correlation coefficient is a measure that determines the degree to which the movement of two different variables is associated. The most common correlation coefficient, generated by the Pearson product-moment correlation, is used to measure the linear relationship between two variables. The strong correlation means that two or more variables have a strong relationship with each other, but a weak correlation means that the variables are not related. Correlation coefficient ranges from -1.00 to +1.00. When correlation coefficient value is -1.00, then it means there is a perfect negative correlation while a value of +1.00 represents a perfect positive correlation.

This statistics is called a correlation coefficient (r) which indicates the relationship between the two and the bigger the correlation the stronger the coefficient between the two variables being compared. Table 4.25 shows the Correlation analysis

Table 4.30: Correlation Analysis

		Y	X_1	X_2	X_3	X_4	Z
Y	Pearson Correlation	1					
	Sig. (2-tailed)						
X_1	Pearson Correlation	.608**	1				
	Sig. (2-tailed)	0.000					
X_2	Pearson Correlation	.651**	.621**	1			
	Sig. (2-tailed)	0.000	0.000				
X_3	Pearson Correlation	.544**	.522**	.510**	1		
	Sig. (2-tailed)	0.000	0.000	0.000			
X_4	Pearson Correlation	.686**	.633**	.605**	.600**	1	
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		
Z	Pearson Correlation	.520**	.513**	.509**	.506**	.429**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	

Where **Y** = Performance of Service State Corporation in Kenya, **X₁** = Ethical procurement practices, **X₂** = Tender Evaluation Process, **X₃** = Procurement records management, **X₄** = Supplier appraisal practices and **Z =** Regulatory Framework

The findings in table 4.18 indicate that the relationship between operational performance of service state corporations in Kenya and ethical procurement practices had r= 0.608, P=0.000. This finding indicates a high correlation between the two variables. The results also show the existence of a good linear association between the variables. This result is comparable and similar to those obtained by Sengbeth (2015) in a study on 'ethical procurement practices and supply chain performance of Kenyan energy sector' which found a correlation coefficient of 0.834 between ethical procurement and supply chain performance. Likewise in a study by Musyoka (2017) on 'Procurement ethics and organizational performance of animal feeds manufacturing firms in Kenya,' the results indicated that procurement ethics and firm return on investment had correlation coefficient (r) = .704, while with firm

profitability had (r) = .816. This mean that ethical procurement practices is very important as it correlates highly with performance at all levels.

In a correlation between operational performance of service state corporations in Kenya and Tender Evaluation Process, the relationship had correlation coefficient of (r) = 0.651, P=0.000. This indicated a positive and significant relationship. The meaning of this relationship is that when tender evaluation process is considered as a key element in the procurement of good and services for the organization, operational performance of service state corporations in Kenya will be achieved. This finding relate to a study by Shukery *et al* (2016) which found that tender evaluation indicators are a Comprehensive contributing factors of performance of organizations. This finding also correspond to a study by Waruguru (2015) which revealed that adoption of tendering process will positively influence organizational performance.

The finding revealed that there was a moderate positive (r=.544, n=158, p=0.000) and significant relationship between procurement records management and operational performance of service state corporations in Kenya. The result shows that an improvement of record management in the organization will lead to an improvement in the operational performance of service state corporations in Kenya. This finding resonates with the assertion by Tumuhairwe and Ahimbisibwe (2016) on Procurement records compliance, effective risk management and records management performance documents which states that, Proper compliance with records regulations and enforcements enables public institutions to improve the management of their records thus leading to effective and efficient creation, preservation, access and better disposal of organization records.

The finding revealed that there was a moderate positive (r=.686, n=158, p=0.000) b b and significant relationship between supplier appraisal practices and operational performance of service state corporations in Kenya. The result shows that an improvement of supplier appraisal in the organization will lead to an improvement in the operational performance of service state corporations in Kenya. The findings show that supplier appraisal has a positive correlation with performance of service

State Corporation in Kenya. It indicates that when an organization improves in gathering information about suppliers and is able to appraise suppliers positively, then several it will be able to cut costs, alleviate risks and achieve continuous improvement in the procurement functions. This is confirmed by the assertion of Moronge, (2018) who acknowledges that the Procurement department needs to have a supplier who is reliable and keeps promises in order to maintain an efficient operation in an end-to-end process.

The Pearson correlation result also found the relationship between the moderator, regulatory framework and dependent variable, operational performance of service state corporations in Kenya to be positive at R=0.520, P=0.000. The result shows that an improvement of regulatory framework in the organization will lead to an improvement in the performance of service State Corporation in Kenya. This confirms a study by Pay stream Advisors, (2016) who argued that regulatory framework is significant to organizations with multiple operations and that without strict adherence to limits of the budget, as well as the strategic use of spending within limits, loss of money through overspending, mismanagement will be experienced.

4.8.2 Hypothesis Testing

The purpose of hypothesis testing is to determine the accuracy of the study hypothesis because the researcher has collected a sample of data. Statistical hypothesis is hypothesis that are tested in such a way that they may be evaluated by appropriate statistical techniques. According to Anupama, (2018), there are two types of Hypotheses. The Null hypothesis which is the hypothesis to be tested and the alternative hypothesis, which is a statement of what is believed to be true if the sample data causes the researcher to reject the null hypothesis. The hypothesis test specifies which outcomes of a study may lead to a rejection of the null hypothesis at a pre-specified level of significance, while using a pre-chosen measure of deviation from that hypothesis (the test statistic, or goodness-of-fit measure) (Denzin, 2017).

Test of Hypothesis 1: Ethical procurement practices and operational performance of service state corporations in Kenya

The first objective of the study was to determine the influence of ethical procurement practices operational performance of service state corporations in Kenya. The literature reviewed in this study as well as theoretical framework associated ethical procurement practices with operational performance of service state corporations in Kenya. Following the theoretical arguments, the following hypothesis was formulated and tested:

H_{01}: Ethical procurement practices does not significantly influence operational performance of service state corporations in Kenya.

The hypothesis was tested by running an ordinary least square regression model. The acceptance and rejection criteria was that, if the p-value is greater than 0.05, the H_0 is not rejected but if it is less than 0.05, the H_0 fails to be accepted. The model summary result for ethical procurement practices is demonstrated in table 4.31.

Table 4.31: Model Summary for Ethical Procurement Practices

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.608[a]	.370	.365	.511892

a. Predictors: (Constant), Variable Ethical procurement practices

The model summary results in table 4.26 reveal that ethical procurement practices accounts for 37.0% of total variance in operational performance of service state corporations in Kenya while the rest, 63.0% is contributed by other related variables. The findings were further supported by p-value of 0.511892. Therefore, the null hypothesis that, ethical procurement practices does not significantly influence operational performance of the service state corporation was rejected and the researcher considered the alternative hypothesis. The alternative hypothesis was that ethical procurement practices have a significant influence on performance of service state corporations in Kenya. Regression indicates the strength of the relationship between the independent variable and the dependent variable (operational performance).

According to Kumari and Yudav (2018), regression analysis consists of the prediction of a continuous independent target from a set of other predictor variables.

As observed by Park, (2018), when the value of R^2 indicates a stronger relationship between the dependent and independent variable, then the null hypothesis is rejected and the alternative hypothesis is accepted. This indicate that the independent variable (ethical procurement practices) shares 37% of performance. The finding implies that if all the service state corporations can implement ethical procurement practices, then performance of the service state corporations can lead to efficiency as a result of reduction of fraud in procurement. This correlates with Kilonzo (2017) who observed that ethical procurement contributes positively to performance of a firm.

The finding is in line with Fourie (2017) who found out that a well-functioning ethical framework results to a public sector environment that encourages high standards of professional ethics and integrity in procurement. Mutinda (2019) found that ethical procurement leads to reduction of wastes in the public sector. The findings also correspond with the study by Israel *et al* (2019) which concluded that joint adoption of ethical procurement practices in public entities improves organizational performance.

Table 4.32: ANOVA Results for Ethical Procurement Practices

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	24.619	1	24.619	91.424	.000[b]
1	Residual	42.007	156	.269		
	Total	66.626	157			

a. Dependent Variable: Operational Performance of Service State Corporation in Kenya
b. Predictors: (Constant), Ethical procurement practices

The ANOVA was used to show the overall model significance. Since the p-value is less than 0.05 as indicated in table 4.27, then ethical procurement practices had a significant explanatory power on operational performance of service state corporations in Kenya.

The ANOVA test in table 4.32 shows that there is significance, that is, (F=91.424 and p-value <0.05). This implies that the null hypothesis is rejected and the alternative hypothesis that there is a positive linear relationship between ethical procurement practices and operational performance of service state corporations in

Kenya is taken to hold implying that the model is significantly fit. The finding is in agreement with that of Okwendo and Muthini (2020) who found that adoption of ethical practices in public procurement improves organizations performance in terms of transparency and fair competition.

The finding also compares well with Baiden (2020), who established that ethical practices such as fairness, transparency, integrity and code of ethics have effects on ethical practices. According to Elia and Erasmus (2015), ethics is a relevant concept within procurement environment since it reduces the impact of unethical behaviors such as collusion and conflict of interests. Abouzeid (2019) document that Ethics in procurement and supply operations are a moving goal post that procurement professionals should ensure they keep up to date with to promote efficiency in organizational performance.

Table 4.33: Coefficient Results for Ethical Procurement Practices

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.988	.226		8.793	.000
	Ethical procurement practices	.556	.058	.608	9.562	.000

a. Dependent Variable: Operational Performance of Service State Corporation in Kenya

The regression coefficients show the relationship between operational performance of service state corporations with ethical procurement practices. As demonstrated in table 4.33, the significance of the observed t-value, which is greater than the critical value, provides further evidence that the two variables are significantly related (B_1=.556 is significant with t=9.562, P=.000). Consequently, the positive beta coefficient implies that a unit change in ethical procurement practices results in a rise in operational performance of service state corporations in Kenya by 0.556 units. As such the null hypothesis that Ethical procurement practices does not significantly influence operational performance of service state corporations in Kenya was rejected. The researcher considered the alternative hypothesis since the ethical

procurement practices has significant influence on operational performance of service state corporations in Kenya. These results therefore show the variables are related under the following model: $Y = \beta_0 + \beta_1 X_1 + e$

Where;

Y_{PPF} = Operational performance of service state corporations in Kenya

β_0 = constant (coefficient of intercept)

X_1 = ethical procurement practices

e = error

Hence

$Y_{PPF} = 1.988 + 0.556X_1 + e$ (Operational performance of service state corporations in Kenya Function = 1.988 + 0.556 ethical procurement practices).

The findings support a study by Haron and Mahzan (2019) on Ethics in Procurement which revealed that it is important for companies to create an official ethical guideline to set boundaries as to what constitutes ethical behavior in procurement and also to provide basis for working together as a team. The findings are also in line with a study by Yusuf *et al* (2014) on Ethical supply chain which found that Ethical procurement practices appear to be a powerful means to reduce social and environmental impacts while simultaneously improving procurement performance.

Test of Hypothesis 2: Tender Evaluation Process and operational performance of service state corporations in Kenya.

The second objective of the study was designed to examine influence of Tender Evaluation Process on operational performance of service state corporations in Kenya. The literature that was reviewed in this study as well as theoretical framework associated with Tender Evaluation Process with performance of service state corporation in Kenya. Following the theoretical arguments, the following hypothesis was formulated and tested:

H$_{02}$: Tender Evaluation Process does not significantly influence operational performance of service state corporations in Kenya.

The hypothesis was tested by running an ordinary least square regression model. The acceptance and rejection criteria was that, if the p-value is greater than 0.05, the H_0 is not rejected but if it is less than 0.05, the H_0 fails to be accepted. The model summary result for tender evaluation process is demonstrated in table 4.34.

Table 4.34: Model Summary Results for Tender Evaluation Process

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.651[a]	.424	.420	.49608

a. Predictors: (Constant), Tender Evaluation Process

From table 4.34, the coefficient of determination as indicated by R square is 0.424 implying that 42.4% of operational performance of service state corporation in Kenya is explained by the Tender Evaluation Process while the rest, 57.3.0% is contributed by other related variables. The researcher rejected the null hypothesis that tender evaluation process does not significantly influence operational performance of service state corporations in Kenya, and considered the alternative hypothesis since Tender Evaluation Process has significant influence on performance of service state corporation in Kenya. Regression indicates the strength of the relationship between the independent variable and the dependent variable (performance). This is in agreement with the findings of Armstrong (2019), who observed that where the value of R square indicates a strong relationship between the independent variable and the dependent variable, then the null hypothesis is rejected and alternative hypothesis is considered.

This finding is in agreement with that of Zang, (2020) who found that the bid evaluation index system for government public projects has a very important practical significance for government in terms of implementing green procurement in the engineering field. The finding also conforms with that of Kozik, (2019) on the process of tender evaluation in public procurement for implementation of design documentation which revealed that price is an important criterion for evaluation by the contracting authorities. The finding agrees to a study by Kinyanjui & Wanyoike, (2021) on influence of Bid Evaluation criteria on procurement function performance in Kenya, which found that bid evaluation contribute significantly to performance of procurement function.

Table 4.35: ANOVA Results

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	28.235	1	28.235	114.730	.000[b]
1	Residual	38.391	156	.246		
	Total	66.626	157			

a. Dependent Variable: Operational performance of service state corporations in Kenya
b. Predictors: (Constant), Tender Evaluation Process

From table 4.35, the p-value is less than 0.05, that is, ((F=114.730 and p-value <0.05). This is an indication that the Tender Evaluation Process had a significant explanatory power on operational performance of service state corporation in Kenya. The finding was further supported by p-value of 0.000. The researcher then rejected the null hypothesis stating that Tender Evaluation Process does not influence operational performance of service state corporation in Kenya, and considered the alternative hypothesis since the Tender Evaluation Process has significant influence on operational performance of service state corporation in Kenya. This finding is in agreement with that of Niewerth *et al* (2020) who found that who observed that through tender evaluation is a means through which an organization can analyze efficiency in public construction contracts.

Table 4.36: Coefficient Results for Tender Evaluation Process

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	2.183	.184		11.831	.000
1	Tender Evaluation Process	.518	.048	.651	10.711	.000

a. Dependent Variable: Operational performance of service state corporations in Kenya

The regression coefficients show the relationship between operational performances of service state corporations in Kenya with Tender Evaluation Process. From the table 4.36, The significance of the observed t-value, which is greater than the critical value (B_1=.518 is significant with t=10.711, P=.000), provides further evidence that the two variables are significantly related. Consequently, the positive beta coefficient implies that a unit change in tender evaluation practice results in a rise in operational

performance of service state corporations in Kenya by 0.518 units. As such the null hypothesis that Tender Evaluation Process does not significantly influence operational performance of service state corporations in Kenya was rejected. The researcher considered the alternative hypothesis since the Tender Evaluation Process has significant influence on operational performance of service state corporations in Kenya. This results therefore show the variables are related under the following model:

$$Y = \beta 0 + \beta 2 \ X2 + e$$

Where

Y_{PPF} = Operational performance of service state corporations in Kenya
$\beta 0$ = constant (coefficient of intercept)
$X1$ = Tender Evaluation Process
e = error
Hence

$$Y_{PPF} = 2.183 + 0.518X_1 + e$$

(Operational performance of service state corporations in Kenya = 2.183 + 0.518 Tender Evaluation Process)

The findings correlate with a study by Zhang, (2020) who found that the bid evaluation index system for government public project green procurement has a very important practical significance for government in terms of implementing the green procurement in the engineering field, building and improving the government public project green procurement system. Benonisen and Strand (2020) carried out a research on how different evaluation methods affect outcome in procurement. The study found out that price is weighted relative more than quality during the evaluation process.

Test of Hypothesis 3: Procurement Record management and operational Performance of Service state corporation in Kenya

The third objective of the study was designed to examine influence of procurement records management on operational performance of service state corporations in Kenya. The literature that was reviewed in this study as well as theoretical framework associated with procurement record process with performance of service state corporation in Kenya. Following the theoretical arguments, the following hypothesis was formulated and tested:

H_{03}: Procurement records management does not significantly influence operational performance of service state corporations in Kenya.

The hypothesis was tested by running an ordinary least square regression model. The acceptance and rejection criteria was that, if the p-value is greater than 0.05, the H_0 is rejected but if it is less than 0.05, the H_0 is accepted. The model summary result for Procurement records management is demonstrated in table 4.37.

Table 4.37: Model Summary Result for Procurement Record Process

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.544ª	.296	.292	.54818

a. Predictors: (Constant), Procurement Record process

The model summary in table 4.25 demonstrates the coefficient of determination as indicated by R square to be 0.296 implying that 29.6% of operational performance of service state corporation in Kenya is explained by the procurement records management while the rest, 70.4% is contributed by other related variables. The researcher therefore rejected the null hypothesis that Procurement records management does not significantly influence operational performance of service state corporations in Kenya, and considered the alternative hypothesis since procurement records management had significant influence on operational performance of service state corporation in Kenya. Regression indicates the strength of the relationship between the independent variable and the dependent variable (performance).

This study finding relate to a study by Muinde *et al* (2020), who found that records management plays a significant role on procurement performance in public universities in Kenya. The findings also relate to Namukasa, (2017) who found that

better records management results into better performance of the procurement units in procurement entities.

Table 4.38: ANOVA Results for Procurement Records Management

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	19.748	1	19.748	65.718	.000[b]
1	Residual	46.878	156	.300		
	Total	66.626	157			

a. Dependent Variable: Operational performance of service state corporations in Kenya
b. Predictors: (Constant), Procurement Record process

The ANOVA was used to show the overall model significance. Table 4.38, indicates that procurement records management had a significant explanatory power on operational performance of service state corporations in Kenya Since the p-value is less than 0.05, (F=67.718 and p-value <0.05). The finding is also supported by the p-value of 0.000. Therefore, the researcher rejected the null hypothesis stating that procurement records management does not influence operational performance of service state corporations in Kenya and considered the alternative hypothesis that procurement records management has significant influence on operational performance of service state corporations in Kenya.

The finding is in agreement with a study by Muinde *et al* (2020), which concluded that procurement records management influences procurement performance in public universities in Kenya. The finding corresponds with a study by Mosweu and Rakemane (2020) on the relationship between records management and good governance, which found that records management plays a vital role in promoting good Governance. The findings also concur with Dzifa et al (2015), who argues that Records are indispensable to the efficient and economic operation of organizations.

Table 4.39: Coefficient Results for Procurement Records Management

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	**Std. Error**	**Beta**		
1	(Constant)	1.931	.273		7.079	.000
	Procurement Record Management	.575	.071	.544	8.107	.000

a. Dependent Variable: Operational performance of service state corporations in Kenya

From table 4.34, the significance of the observed t-value, which is greater than the critical value, provides further evidence that the two variables are significantly related (B_1=.575 is significant with t=8.107, P=.000.). Consequently, the positive beta coefficient implies that a unit change in procurement records management results in a rise in operational performance of service state corporations in Kenya by 0.556 units. As such the null hypothesis was rejected. The researcher considered the alternative hypothesis since the ethical procurement practices has significant influence on operational performance of service state corporations in Kenya. These results therefore show the variables are related under the following model:

$Y = \beta_0 + \beta_3 X_3 + e$

Where;

Y_{PPF} = Operational performance of service state corporations in Kenya

β_0 = constant (coefficient of intercept)

X_1 =procurement records management

e = error

Hence

$\mathbf{Y_{PPF} = 1.931 + 0.575X_1 + e}$ (Operational performance of service state corporations in Kenya Function = 1.931+ 0.575 procurement records management).

The findings are in line with a study by Freda, (2014) on Assessment of records management process among the administrative staff of university which revealed that

Sound records management is at the Centre of increased accountability and good governance and it is the best weapon in fighting against fraud and corruption in procurement. According to Tumuhairwe & Ahimbisibwe, (2015), there is a significant positive relationship between procurement records compliance and records management performance.

Test of Hypothesis 4: Supplier appraisal practices and operational performance of service state corporations in Kenya

The fourth objective of the study was designed to evaluate influence of supplier appraisal practices on operational performance of service state corporations in Kenya. The literature that was reviewed in this study as well as theoretical framework associated with supplier appraisal practices with performance of service state corporation in Kenya. Following the theoretical arguments, the following hypothesis was formulated and tested:

H_{04}: Supplier appraisal practices does not significantly influence operational performance of service state corporations in Kenya.

The hypothesis was tested by running an ordinary least square regression model. The acceptance and rejection criteria was that, if the p-value is greater than 0.05, the H_0 is rejected but if it is less than 0.05, the H_0 is accepted. Table 4.40 shows the model summary result for supplier appraisal practices

Table 4.40: Model Result for Supplier Appraisal Practices

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.686[a]	.471	.467	.47579

a. Predictors: (Constant), Supplier appraisal practices

The model summary in table 4.40 demonstrates the coefficient of determination as indicated by R square to be 0.471 implying that 47.1% of operational performance of service state corporation in Kenya is explained by the supplier appraisal practices while the rest, 52.9% is contributed by other related variables. The researcher rejected the null hypothesis and considered the alternative hypothesis as supplier

appraisal practices had significant influence on operational performance of service state corporation in Kenya. Regression indicates the strength of the relationship between the independent variable and the dependent variable (performance). This study finding relate to a study by Munyaneza and Mulyungi (2018) who concluded that there is a strong positive relationship between supplier appraisal on procurement performance in government ministries. The study is in line with a research finding by Khalili *et al* (2017) who found that ensuring fair dealings with supplier is essential for minimizing the potential risks from undue influence under the circumstance oof discretion. The study conforms to a study by Delloite (2015) which documents that performing supplier audits is key in identifying non-conformance with organizational values, standards laws and regulations.

Table 4.41: ANOVA Result for Supplier Appraisal Practices

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	31.312	1	31.312	138.317	.000[b]
1	Residual	35.315	156	.226		
	Total	66.626	157			

a. Dependent Variable: Operational Performance of Operational performance of service state corporations in Kenya
b. Predictors: (Constant), Supplier appraisal practices

The ANOVA was used to show the overall model significance. As indicated in Table 4.41, the p-value is less than 0.05, that is, (F=138.317 and p-value <0.05). This implies that supplier appraisal practices had a significant explanatory power on operational performance of service state corporations in Kenya. The finding is also supported by the p-value of 0.000. Therefore, the researcher rejected the null hypothesis stating that supplier appraisal practices does not influence operational performance of service state corporations in Kenya and considered the alternative hypothesis that supplier appraisal practices has significant influence on operational performance of service state corporations in Kenya.

The finding is in agreement with that of Murigi (2014) who found that performance of the procurement process is directly determined by supplier evaluation and appraisal criteria. The study relates to findings by Lel and Kwasira (2019) who found

that supplier commitment has a positive and significant influence on performance of procurement function.

Table 4.42: Coefficients Result for Supplier Appraisal Practices

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.123	.257		4.369	.000
	Supplier appraisal practices	.725	.062	.686	11.761	.000

a. Dependent Variable: Operational performance of service state corporations in Kenya

The regression coefficients show the relationship between performance of service state corporations with supplier appraisal practices. From table 4.42, the significance of the observed t-value, which is greater than the critical value, provides further evidence that the two variables are significantly related, that is, (B_1=.725 is significant with t=11.761, P=.000). Consequently, the positive beta coefficient implies that a unit change in supplier appraisal practices results in a rise in operational performance of service state corporations in Kenya by 0.725 units. As such the null hypothesis that Supplier appraisal practices does not significantly influence operational performance of service state corporations in Kenya.was rejected. The researcher considered the alternative hypothesis since the supplier appraisal practices has significant influence on operational performance of service state corporations in Kenya. These results therefore show the variables are related under the following model: $Y = \beta_0 + \beta_4 X_4 + e$

Where;

Y_{PPF} = Operational performance of service state corporations in Kenya

β_0 = constant (coefficient of intercept)

X1 =supplier appraisal practices

e = error

Hence

$\mathbf{Y_{PPF} = 1.123 + 0.725X_1 + e}$ (Operational performance of service state corporations in Kenya Function = 1.123+ 0.725 Supplier appraisal practices).

The findings correspond with a study by Opaleye et al (2020) on effect of supplier relationship management practice. The study revealed that supplier appraisal which is the assessment of potential supplier capability positively and significantly affects a firm`s performance. The findings also agree with the study by Mutai and Okello (2016) on effects of supplier evaluation on procurement performance of public universities in Kenya which affirms that supplier quality commitment directly determines the level of quality in products and services obtained through procurement activities. According to CIPS (2013), performance of suppliers substantially have impacts on the efficiency and effectiveness of the procuring entity to a great extent.

4.8.3 The Multivariate Regression Analysis

The multivariate regression analysis was done between the independent variables with the dependent variable to determine how the independent variables jointly influenced the dependent variable. The results for the regression are represented in following tables 4.43, 4.44 and 4.45 respectively.

Table 4.43: Model Summary Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.756[a]	.572	.560	.43213

a. Predictors: (Constant), Ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices

The results on the 4.43 indicate that the model summary has multiple coefficient of determination, R squared = .572. R squared measures the goodness of fit of the fitted sample regression line. It also gives the proportion of the total variation in the dependent variable, explained by joint independent variables. From the results, R squared of 0.572 means that the independent variables; ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices, jointly explain 57.2% of the total variance in operational

performance of service state corporations in Kenya while 43.8% can be explained by other variables not included in this study. The ANOVA results for the relationship are presented in table 4.44.

Table 4.44: Multiple ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	38.056	4	9.514	50.950	.000[b]
1	Residual	28.570	153	.187		
	Total	66.626	157			

a. Dependent Variable: Performance of Procurement of service state corporations in Kenya
b. Predictors: (Constant), ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices

The regression ANOVA results in table 4.44 show that the independent variables jointly had a significant influence on the dependent variable, with $F_{(4,153)} = 50.950$. The computed F value is far high than the critical value or greater than 1 meaning that the total variance in the dependent variable explained by the independent variables is large than the variance not explained since the p-value for the F-value is 0.000, which is equivalent to zero. The multiple coefficients results are presented in the following table 4.45.

Table 4.45: Multiple Coefficients Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	.732	.258		2.834	.005
	Ethical procurement practices	.132	.075	.144	1.755	.081
1	Tender Evaluation Process	.194	.068	.244	2.866	.005
	Procurement Record process	.171	.070	.162	2.445	.016
	Supplier appraisal practices	.365	.083	.345	4.420	.000

a. Dependent Variable: Operational performance of service state corporations in Kenya

The partial regression coefficients show the relationship between operational performance of service state corporations in Kenya with ethical procurement practices to be B_1=.132, P=.081; with Tender Evaluation Process, B_2=.194, P=.005; with procurement records management, B_3=.171, P=.016, and with supplier appraisal practices, B_4=.365, P=.000. These findings show that all the partial coefficients of the independent variables have t-values which are all significant and greater than the t-critical values. This is evidence to show that all the independent variables are significantly related to the dependent variable. The constant of the relationship, which represents the average value of the dependent variable when all the independent variables are set to zero, is .732. This result therefore means that at a multivariate level all independent variables jointly have a positive and significant relationship with the dependent variable under the following partial regression equation:

Y_{PPF} = .732+ .132 Ethical procurement practices + .194 Tender Evaluation Process + .171 procurement Record process + .365 Supplier appraisal practices + ε .

4.8.4 Moderating Variable Regression Analysis

In statistical terms, moderation is where a relationship between an independent variable and a dependent variable changes according to the value of a moderator variable (Dawson, 2014). Additionally, moderating variables are essential to assess whether two variables have the same relation across groups. As shown in tables 4.46, 4.47 & 4.48, this study conducted the analysis to confirm significance of the moderator to the operational performance of service state corporations in Kenya.

Table 4.46: Model Summary with Moderating Variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.821[a]	0.674	0.663	0.37810

Dependable Variable: Operational performance of service state corporations in Kenya
Predictors: (Constant), Ethical process, Tender Evaluation Process, procurement records management, supplier appraisal practices
Moderator: Regulatory framework

The model summary in table 4.46 demonstrates the overall R square was .674. These findings show that 67.4% of operational performance of service state corporations can be accounted for by the independent variables of Ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices when regulatory framework was moderating the relationship

Table 4.47: ANOVA Table

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	44.896	5	8.979	62.807	.000[c]
	Residual	21.730	152	.143		
	Total	66.626	157			

Dependable Variable: Operational performance of service state corporations in Kenya
Predictors: (Constant), Ethical procurement practices, Tender Evaluation Process, procurement records practice, supplier appraisal practices
Moderator: Regulatory framework

In table 4.47, the ANOVA was used to show the overall model significance. Since the p-value is less than 0.05, this means that the whole model after the introduction of the moderating variable is significant. (F = 168.161 and p-value <0.05). The F value is very high meaning that the moderator variable has an influence on the relationship as it increases the *F*-value.

Table 4.48: Tables of Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.009	.068	.010	.137	.021
	X_1Z	.176	.059	.222	2.968	.003
	X_2Z	.176	.061	.166	2.865	.005
	X_3Z	.196	.076	.185	2.568	.011
	X_4Z	.389	.056	.425	6.917	.000

Dependable Variable: Operational performance of service state corporations in Kenya
Predictors: (Constant), Ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices
Moderator: Regulatory framework

The results in table 4.48 shows that show that the coefficients for the independent variables are all significant as their computed t-value are greater than 1 and hence different from zero with P<.05. These findings therefore confirm the existence of a moderation relationship. This result therefore means that at a multivariate level all independent variables jointly have a positive and significant relationship even after the introduction of the moderating variable, with the dependent variable. Table 4.43 shows the coefficients for the relationship between the dependent variable and the independent variables together with the moderator.

4.8.5 Hierarchical Multiple Regression

A moderator is a variable that specifies conditions under which a given predictor is related to an outcome (Memon *et al*, 2019). Moderation implies an interaction effect, where introducing a moderating variable changes the direction or magnitude of the relationship between two variables (Rizki, 2021). According to Vij and Farooq, (2017), a moderator, performs three key functions, that is, enhancing, buffering and antagonizing, where increasing the moderator would reverse the effect of the predictor on the outcome.

Hierarchical multiple regression was used to assess the effects of the moderating variable. According to Kim, (2016), Hierarchical regression is a way to show if variables of interest explain a statistically significant amount of variance in the Dependent Variable (DV) after accounting for all other variables. In order to confirm whether a third variable, moderator, has an effect on the relationship between the two variables X and Y, it is important to show that the nature of their relationship changes as the values of the moderating variable M change (Zainodin & Yap, 2015). The following figure represents the moderation effect hypothesized.
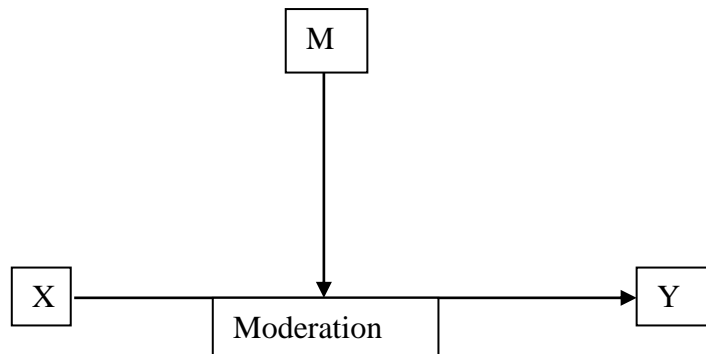
Figure 4.1: Moderation Effect

The regression results obtained for test for moderation are shown in the following tables 4.49, 4.50 and 4.51 respectively.

Table 4.49: Model Summary Results for Moderation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.756[a]	.571	.560	.43213
2	.821[b]	.674	.663	.37810

a. Predictors: (Constant), Ethical procurement practices, Tender evaluation process, Procurement records management, supplier appraisal practices
b. Predictors: (Constant), Ethical procurement practices, Tender evaluation process, Procurement records management, supplier appraisal practices Regulatory Framework

The results in table 4.49 show that model 1 had a coefficient of correlation, R, equal to .756 while model 2 had and R equal to .821. This shows that model 2 has a high value of R as compared to model. Likewise, the value of R squared for model 1 was .571 while model 2 was .674. This shows that in model 2 the independent variables together with the moderator explain high variance in the dependent variable than the independent variables without the moderator variable. These results show further that model 2 is more superior to model 1 and hence it was adopted by this study as the ultimate model. The following ANOVA in table 4.50 further confirms this superiority of model 2.

Table 4.50: ANOVA Results for Moderation

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	38.056	4	9.514	50.950	.000[b]
	Residual	28.570	153	.187		
	Total	66.626	157			
2	Regression	44.896	5	8.979	62.807	.000[c]
	Residual	21.730	152	.143		
	Total	66.626	157			

a. Dependent Variable: Operational performance of Service state corporations in Kenya

b. Predictors: (Constant), Ethical procurement practices, Tender evaluation process, Procurement records management, supplier appraisal practices

c. Predictors: (Constant), Ethical procurement practices, Tender evaluation process, Procurement records management, supplier appraisal practices Regulatory Framework

Table 4.50 shows the f-value for model 2 (62.807, p=.000) is higher than that for model 1(50.950, p=.000). The following table of coefficient also testifies that model 2 is the best model for the relationship under study. From the table 4.46, the t-statistics for model 2 are all higher as compared to the t-values for model 1.

Table 4.51: Coefficients for the Moderation Relationship

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	**Std. Error**	**Beta**		
1	(Constant)		.732	.258		2.834	.005
	Procurement	ethical practices	.132	.075	.144	1.755	.081
	Tender	Evaluation process	.194	.068	.244	2.866	.005
	Procurement	Record Management	.171	.070	.162	2.445	.016
	Supplier	Appraisal practices	.365	.083	.345	4.420	.000
2	(Constant)		.009	.068	.010	1.137	.021
	Procurement	ethical practices	.176	.059	.222	2.968	.003
	Tender	Evaluation process	.176	.061	.166	2.865	.005
	Procurement	Record Management	.196	.076	.185	2.568	.011
	Supplier	Appraisal Practices	.389	.056	.425	6.917	.000

a. Dependent Variable: operational performance of service state corporations in Kenya

Table 4.51 shows that the coefficients for model 1 are all significant as their computed t-value is greater than 1 and hence different from zero with P<.05. The results from Model 2 also show that the coefficients for the independent variables are all significant as their computed t-value are greater than 1 and hence different from zero with P<.05. These findings therefore confirm the existence of a moderation relationship.

4.8.6 Overall Regression Model

After conducting hierarchical regression, the following two regression models were generated

$Y_{PPF} = .732 + .132EPP + .194TEPP + .171 PRP + .365SAP + \varepsilon$ ………… Model 1

$Y_{PPF} = .352 + .196SAP + .176 TEP + .176 PRM + .009EPP + \varepsilon$ ……… Model 2

Model 2 was found to have a higher R- squared value than model 1 and explained 67.4% of the total variance in the dependent variable, performance of procurement function while model 1 explained 57.1% of the total variance. The findings of the study indicate that model 2, which was the moderated relationship, had a superior effect on the dependent variable than model 1, which was not the moderated model and hence the optimal model for the study.

Further based on the findings it was evident that supplier appraisal practices (SAP) had the most effect on performance of procurement function, followed by procurement records management (PRM), ethical procurement practices (EPR) and lastly tender evaluation process (TEP). The study therefore came up with a revised conceptual framework with all the significant variables.

4.9 Trend Analysis for Operational Performance of Service State Corporation in Kenya

Over time assessment of trends in operational performance for Service State Corporation in Kenya, more so going by the latest Audit General reports (2020-2023), unveils underlying efficiency in governance and financial management systems. The areas of concern based on this analysis are fraud level, operating cost, and transparency and accountability.

4.9.1 Fraud Analysis

An analysis of fraud levels from 2020 to 2023 shows worrying trends. According to the Auditor General's report, reported fraud cases have been gradually increasing. While there were relatively few fraud cases in 2020, there was a significant increase in 2021 and was expected to continue increasing in 2022 and 2023. This increase is due to a variety of factors, including weak internal controls and systemic corruption.

 The Auditor General's report for 2018-2019 highlighted serious fraudulent and financial irregularity cases. Several state-owned enterprises were involved in irregularities, including misappropriation of funds, irregularities in awarding contracts, and misappropriation of assets. The fraud cases reported in 2019-2020

decreased slightly compared to the previous year. However, the audit still uncovered numerous financial irregularities, especially in procurement processes and improper management of public funds.

 The report for 2021-2022 showed a further reduction in fraud cases. This improvement can be attributed to the tightening of internal controls and improved monitoring mechanisms put in place by several state-owned enterprises. However, some companies still faced challenges in completely eradicating fraud. Fraud incidents have declined significantly over the past three years. This positive trend suggests that efforts to improve oversight and internal controls are beginning to bear fruit, although much work remains to achieve full accountability.
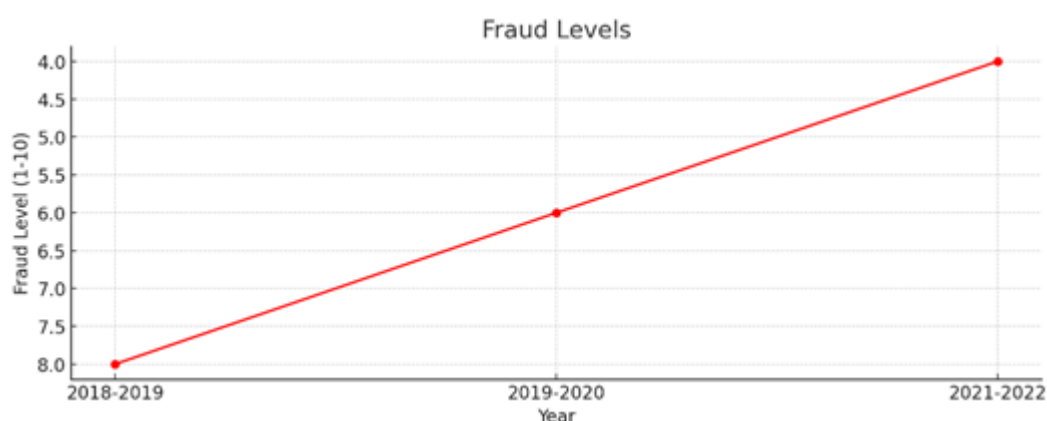
Figure 4.2: Trend Analysis of Fraud Level

Based on the results in Figure 4.2, it is evident that there is a decreasing pattern in the fraud level. The reduction in fraud levels suggests that measures to combat fraud, such as stronger internal controls and monitoring, are proving effective (Office of the Auditor-General, 2019; 2020; 2022).

4.9.2 Operation Cost

The 2018-2019 report revealed widespread struggles of state-owned enterprises with high operational costs (Smith, 2019). Inefficiency, overstaffing, and wasteful spending were found to be common issues highlighted in the audits (Jones et al., 2018). However, amid these challenges, signs of progress in cost-reduction efforts emerged in 2019-2020 (Brown & Johnson, 2020). Measures such as streamlining

employee levels and improving procurement practices were cited as key in helping some companies reduce their operating costs (Johnson, 2020).

Despite these initial steps, the overall impact has remained minimal as many firms continue to suffer from significant cost issues (Smith, 2019). The year 2021-2022 marked a turning point when various Service state entities made more concerted efforts towards cost reduction (Williams et al., 2022). Notable success stories emerged as several institutions implemented effective cost reduction measures (Thomas, 2021). These measures included energy conservation initiatives, renegotiating supplier contracts, and implementing technology-based solutions to streamline operations (Jones et al., 2021). This resulted in a notable reduction in operating costs and a positive trend towards improved financial performance (Brown & Johnson, 2022).

The evolution of this trend suggests that the effectiveness of cost reduction efforts in SOEs is gradually but steadily improving (Williams et al., 2022). With each passing year, implementing targeted strategies appears to produce better results, ultimately contributing to greater financial stability and sustainability (Thomas, 2021).
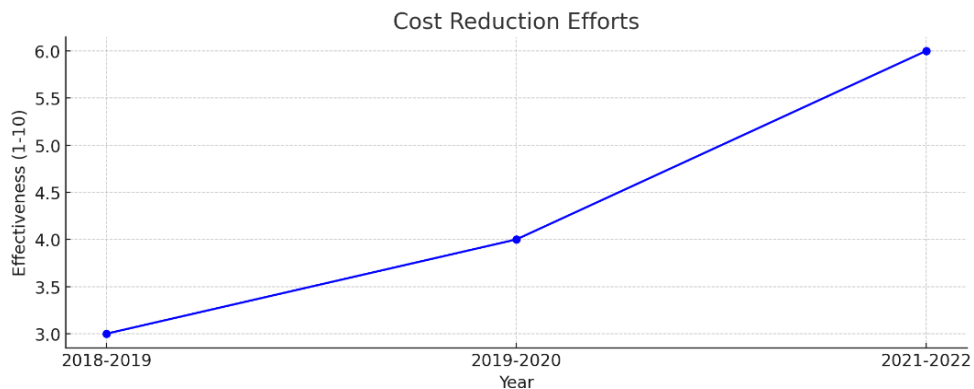

Figure 4.3: Trend Analysis of Operation Cost

Figure 4.4 indicate an increasing rate of cost reduction. The increasing effectiveness of operation cost reduction efforts indicates that state corporations are becoming more efficient in managing their operational costs through various initiatives and improved practices (Office of the Auditor-General, 2019; 2020; 2022).

4.9.3 Transparency and Accountability

According to the Audit Office report, transparency and accountability measures have steadily improved. Improved reporting standards and stricter compliance protocols introduced in 2021 have increased the transparency of financial reporting and corporate governance. The 2018-2019 report highlighted serious deficiencies in transparency and accountability. Many state-owned enterprises did not provide timely and accurate financial reports, and public procurement regulations were not followed (Act Office of the Audit Office, 2019). The 2019-2020 audit report highlighted some improvements in transparency and accountability. Increased public scrutiny and regulatory pressure have led to improvements in reporting practices and regulatory compliance, although inconsistencies remain (Occupational Auditor General, 2020). The 2021-2022 report showed significant progress in transparency and accountability.

Many state-owned enterprises improved their financial reporting and compliance with procurement laws (Occupational Auditor General, 2022). The introduction of e-procurement systems and regular audits contributed to these improvements. Continued improvements in transparency and accountability are encouraging, suggesting that recent reforms are having a positive impact (Mwangi, 2020; Kimani, 2023).
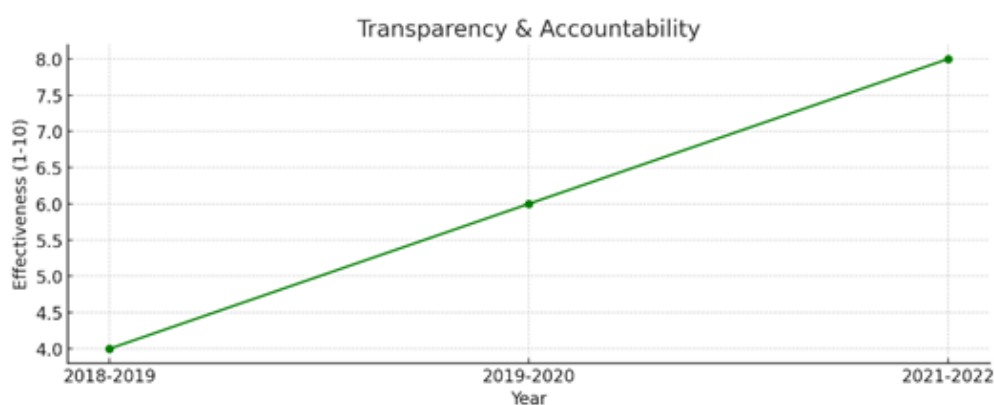
Figure 4.4: Trend Analysis for Transparency and Accountability

From the findings in Figure 4.4, the transparency and accountability trend over the past three years shows significant improvement, reflecting efforts to improve governance standards. In 2023, the transparency and accountability score will further improve to 80, indicating continuous improvement and instillation of good governance practices within the company. Initiatives such as regular training of employees on governance issues, adoption of international best practices, and strong feedback mechanisms from stakeholders helped it achieve this high rating (Wanjiku, 2023)

4.10 Summary of Hypothesis testing

Based on the results of hypothesis testing, the following summary below as presented in table 4.52 was adopted.

Table 4.52: Summary of Hypothesis Testing

Objective	Null Hypothesis	Rule	P-Value	Comment
To determine influence of ethical procurement practice on operational performance of service state corporations in Kenya.	Ethical procurement practices does not significantly influence operational performance of service state corporations in Kenya	Reject the null hypothesis if P-Value is less than 0.05	0.000 0.000	Reject the Null Hypothesis
To examine influence of Tender Evaluation Process on operational performance of service state corporations in Kenya.	Tender evaluation process does not significantly influence operational performance of service state corporations in Kenya	Reject the null hypothesis if P-Value is less than 0.05	0.000	Reject the Null Hypothesis
To establish influence of procurement records management on operational performance of service state corporations in Kenya. .	Procurement records management does not significantly influence operational performance of service state corporations in Kenya	Reject the null hypothesis if P-Value is less than 0.05	0.000	Reject the Null Hypothesis
To evaluate influence of supplier appraisal practices on operational performance of service state corporations in Kenya. .	Supplier appraisal practices does not significantly influence operational performance of service state corporations in Kenya	Reject the null hypothesis if P-Value is less than 0.05	0.000	Reject the Null Hypothesis
To establish the moderating effect of regulatory framework on the relationship between public procurement Implementation and operational performance of service state corporations in Kenya	Regulatory framework does not have a moderating effect on the relationship between public procurement implementation and operational performance of service state corporations in Kenya	Reject the null hypothesis if P-Value is less than 0.05		Reject the Null Hypothesis

4.11 Optimal Model

The aim of hypothesis testing was to guide in derivation of the optimal model (revised conceptual framework) where only the significant variables were included in the model. After conducting hypotheses testing, the study came up with a revised conceptual framework (optimal model). In the new conceptual framework, all the significant variables, that is, ethical procurement practices, tender evaluation process,

procurement records management, supplier appraisal practices and regulatory framework were all included. Consequently, the findings of correlation analysis as shown in table 4.30 was used to categorize the new revised optimal model in terms of their contribution to operational performance of service state corporations in Kenya. From the correlation analysis, Supplier appraisal practices had the strongest correlation with operational performance of service state corporations in Kenya as shown by the Pearson Correlation coefficient of 0.686. The second one was Tender Evaluation Process with a Pearson Correlation coefficient of 0.651, followed by Ethical procurement practices with a Pearson Correlation coefficient of 0.608, followed by Procurement records management with a Pearson correlation coefficient of 0.544 and finally Regulatory Framework with a Pearson Correlation coefficient of 0.520. From the research findings, the revised study model is as shown in figure 4.5 below.
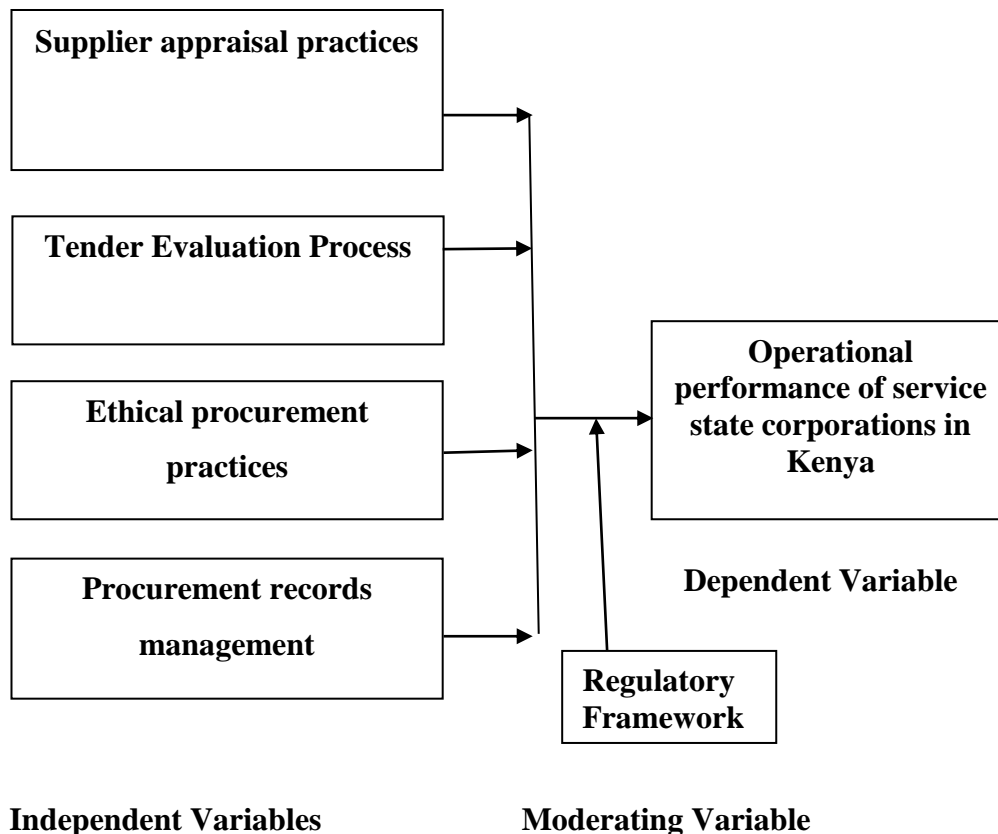

Figure 4.5: Optimal Model

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter of the study presents summary of the entire research grounded on the study objectives and hypotheses. It examined the influence of Public procurement implementation on operational performance of service state corporations in Kenya. Similarly, the study investigated the moderating influence of regulatory framework on the relationship between public procurement implementation and operational performance of service state corporations in Kenya. This chapter is therefore divided into four sections: summary of the study, conclusions, recommendations and areas of further research. Thus, this chapter presents the summary of the study as guided by the specific objectives, research hypothesis and conclusion reached based on the study findings. Recommendations are provided to enhance operational performance of service state corporations in Kenya while areas of further research are suggested to fill the gaps which have not been discussed by the study.

5.2 Summary of Findings

The study sought to determine the influence of Public procurement implementation on operational performance of service state corporations in Kenya. The study specifically focused on ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices and the moderating influence of regulatory framework and how they influence operational performance of service state corporations in Kenya. The empirical literature indicated that when adopted and implemented, the conceptions (ethical procurement practices, Tender Evaluation Process, procurement records management and supplier appraisal practices) reduces fraud, result in cost reduction, promotes transparency and accountability and enhance quality improvement. Public procurement implementation is a mechanism which enhances adherences to procurement processes thus enabling for cost reduction among the service state corporations in Kenya.

In this study, survey research design was adopted to produce statistical information about the aspects of Public procurement implementation and operational performance of service state corporations in Kenya and this was fundamental for this study. The study finding The study findings indicated that the four variables (ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices) jointly are positively associated with operational performance of service state corporations in Kenya. Furthermore, the four predictors explain 57.2% of change in operational performance of service state corporations in Kenya. This is an implication that the remaining 42.8% of the variation in operational performance of service state corporations in Kenya could be accounted for by other factors not involved in this study. Secondly, regulatory framework was found to have a moderating effect on ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices. Regulatory framework accounted for 67.4% of the total change in operational performance of service state corporations in Kenya

5.2.1 Ethical Procurement Practices and Operational Performance of Service State Corporations in Kenya

The first objective of this study was to establish whether ethical procurement practices had influence on performance of service State Corporation in Kenya. Descriptive statistics showed that ethical procurement practices had a considerable influence on operational Performance of Service State Corporation in Kenya resulting into purchasing efficiency. The study revealed that the practice of purchasing ethics through implementation of high integrity by the procurement staffs promotes fairness in the procurement process. As evidenced from the study findings, confidentiality was found to play a significant role on operational performance of service state corporations in Kenya. Majority of the respondents agreed that confidentiality is observed during the procurement process as required by the Public Procurement and Asset Disposals Act, 2020. The study revealed that procurement staff uphold independence during decision making in procurement process. However, the study noted that service state corporations do not frequently organize training for the procurement staff to enhance their capacity and competency level. This study

established that, implementation of public procurement through ethical procurement practices result into an increase in operational performance of Service State Corporation in Kenya

5.2.2 Tender Evaluation Process and Operational Performance of Service State Corporations in Kenya

The second objective of this study was to find out influence of Tender Evaluation Process on operational performance of service State Corporation in Kenya. From the descriptive findings, the study revealed that there is a significant positive relationship between Tender Evaluation Process and operational performance of service state corporations in Kenya. The study found that e-tendering which is a requirement of the public procurement and Asset disposal 2020, is not absolutely practiced by service state corporations in Kenya. The study revealed that Scoring method is developed for technical evaluation of bids. The use of scoring method is to enable evaluators to select from submitted bids, suitable suppliers who meet the set standards. The study also revealed that financial evaluations by majority of service state corporations are not based on market research and total cost of ownership. One of the basic rules of procurement is that in the end, it is important to think in terms of the total cost of ownership, which do not only include the purchase price, but also time and resources that are expended in the pursuit of the ownership. If not considered, an organization may not be able to realize purchasing cost reduction. However, the study found that there is transparency in tender award. Transparency is significant as it enhance openness and promotes integrity in procurement thus minimizes discrimination among the bidding firms.

5.2.3 Procurement Records Management and Operational Performance of Service State Corporations in Kenya

The third objective of this study was to examine procurement records management influence on performance of service State Corporation in Kenya. Descriptive statistics showed that procurement records management had a considerable influence

on operational Performance of Service State Corporation in Kenya resulting into records safety and accountability in the public procurement process. The study revealed that proper records management makes it easy for access to procurement record. This saves time and promotes audit trails on procurement activities. Data encryption was found to promote data security by ensuring that non-authorized users do not access procurement records. The study however noted that procurement staff in charge of records are not trained for development of new skills on proper records management. Lastly, the study noted that records in service state corporations are maintained in accordance with the requirement of ISO 15489 Compliance, which requires records to have Backup, be filed and archived in accordance to international standards.

5.2.4 Supplier Appraisal Practices and Operational Performance of Service State Corporations in Kenya

The fourth objective of this study was to determine how implementation of supplier appraisal influences operational Performance of Service State Corporation in Kenya. Descriptive statistics showed that supplier appraisal practices had a considerable influence on Performance of Service State Corporation in Kenya resulting into timely purchase and provision of quality goods and services. The study revealed that due diligence is performed to confirm material facts about the supplier. Service state corporations conduct financial evaluation to showcase the suitability of supplier to perform. The study provided evidence that there is proper communication with suppliers by the service state corporations in Kenya. In procurement and supply chain at large, good communication fosters better working relations between the trading partners leading to timely delivery and improvement in productivity. The study found that supplier show commitment to contacts. Through commitment, trust is developed between supplier and the buying company and suppliers will find it necessary to exert effort in ensure continuous improvement over time.

5.2.5 Moderating Effect of Regulatory Framework on the Relationship between Public Procurement Implementation and Operational Performance of Service State Corporations in Kenya

A moderator is a variable which specifies conditions under which a given predictor is related to an outcome. This study used regulatory framework to assess how public procurement Implementation on the four variables (ethical procurement practices, Tender Evaluation Process, procurement records management and supplier appraisal practices) influences operational Performance of Service State Corporation in Kenya. From the descriptive analysis, service state corporations were found to be compliant with regard to the use of procurement law to carry out procurement activities. This resonates with the requirement by Public Procurement and Asset Disposals Act, 2020, which requires that and national government entities to carry out public procurement activities as stipulated in the procurement law.

The study revealed that there is proper selection of procurement methods by the state agencies. Proper selection would enable procuring entities to strike a balance between the need for wider competition on one hand, and the complexity of the procedure on the other hand. The study however found that most service state corporations don not prepare proper budgets at the planning stages of procurement. The result of regression model summary for moderation shows that 67.4% of performance of service state corporations can be accounted for by the independent variables (ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices) when regulatory framework was moderating the relationship. Hence, compliance to the regulatory framework is significance in improving organization performance.

5.3 Conclusion

Based on the study findings, it is concluded that service state corporations were dominated by male practitioners in the areas of Audit, ICT and Procurement, with females being less by half of the margin of the total number of males. The results also established that majority of respondents have the requisite competence in their

areas of specialization. This is justifiable since these are key areas of organizational operation which require high level of competency for effective decision making. The main purpose of the study was to assess influence of public procurement implementation on operational Performance of Service State Corporation in Kenya. The output given from the findings indicate that there is a significant positive relationship between the components of public procurement implementation namely; ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices and regulatory framework with Performance of Service State Corporation in Kenya. This implies that a unit increase in public procurement implementation on the components (ethical procurement practices, Tender Evaluation Process, procurement records management, supplier appraisal practices) leads to an improvement in operational performance of service state corporations in Kenya.

5.3.1 Ethical Procurement Practices

The study concludes that the application of integrity, confidentiality and fair competition makes ethical procurement practices to be one of the major contributing factor towards operational Performance of Service State Corporation in Kenya. When individuals develop positive attitudes and integrity in procurement processes, the organization will experience sound procurement with reduced cases of fraud, collusion and conflict of interest. The concept of Ethical procurement practices with regard to confidentiality and competency level is key in ensuring limited disclosure of institutions information and application of high level of professionalism in decision making. The study therefore concludes that there exist a positive correlation between ethical procurement practices and Performance of Service State Corporation in Kenya, where, a unit increases in application of ethical procurement practices such as integrity, confidentiality and fair competition, results into an improvement in operational performance of service state corporations in Kenya and vice-versa.

5.3.2 Tender Evaluation Process

The application of e-tendering in procurement process is a requirement by the public procurement and Asset disposal Regulation, 2020. This study concludes that e-

tendering process is not to a high extent practiced by service state corporations in Kenya. If implemented, the e-Tender Evaluation Process will lead to reduction of operation costs and increase efficiency in terms of time and services offered to suppliers, user departments and other stakeholders. The study concludes that service state corporations develop Scoring method for technical evaluation of bids to serve many purposes including ensuring fair competition during the technical evaluation process. The study revealed that most purchase done by state agencies are not as per the prevailing market prices. This leads to purchase of products at higher prices which is against the spirit of public procurement. However, majority of the respondents acknowledged that there is transparency in contract award. The study therefore concludes that there is indeed a statistical significant relationship between Tender Evaluation Process and performance of services state corporations in Kenya.

5.3.3 Procurement Records Management

From the study finding, proper filling of procurement records ensured easy access to records. This is an indication of high level of transparency and accountability by the services state corporations in Kenya. Managing of procurement records in accordance with ISO 15489 provides for easy access to information when required by authorized users hence demonstrating high level of transparency. The adoption of data encryption practice ensured security to procurement records by enabling only authorized users to access the information. When organizations embrace proper records management, information access by management and auditors become easy thus saving on time and the purchasing function will be able to make accurate decision based on the available data. The study concludes that there is a statistical significant relationship between procurement records management and performance of service state corporations, with a unit increase in procurement records management resulting in an improvement in operational performance of service state corporations in Kenya.

5.3.4 Supplier Appraisal

The study revealed that there is a significant relationship between supplier appraisal practices and operational performance of service state corporations in Kenya. Due

diligence done on supplies to confirm material facts was found to be a key practice by the service state corporations in Kenya. On the other hand, engaging supplier at the initial stages of product design give rise to quality outcome and promote good relationship between buyer and supplier. Where there is enhanced communication in procurement practice and information is shared freely, trust is achieved and there will be minimal distortion of information from one end of a supply chain to the other. Lastly, when suppliers are committed to contract agreements, the five rights of purchasing are achieved where right quantity and quality products will be supplied from the right source, delivered at the right place at the right time. Supplier appraisal is one of the major contributors of performance of organizations across the globe. The study concludes that there is a statistical significant relationship between supplier appraisal and operational performance of service state corporations in Kenya, with a unit increase in supplier appraisal resulting in improvement on Performance of Service State Corporation in Kenya.

5.3.5 Regulatory Framework

This study sought to find out the moderating influence of regulatory framework on operational performance of service state corporations in Kenya. The results of this study indicated that regulatory framework moderates the variables and finally influenced the operational performance of service state corporations in Kenya. The study revealed that the application of Due professional care when assessing procurement procedures is observed which promotes compliance to the laid down procurement rules and regulations. Service state corporations were found to be using public procurement Act as their main tool of reference in acquisition of goods and services.

The study revealed that selection of proper method of procurement is achieved by the service state agencies in Kenya. Lastly, this research study revealed that budget preparation is not properly done at the planning stage of procurement by most of the service state corporations in Kenya. This clearly explain the reason why the Kenyan Government is experiencing high pending bills where most public institutions are not able to pay for contracts already performed by suppliers. The study concludes that

compliance to regulatory frameworks is important in influencing operational performance of service state corporations in Kenya.

5.4 Recommendations

The study is a justification of the fact that the role of public procurement implementation on operational Performance of Service State Corporation in Kenya cannot be underestimated and has contributed to improved procurement practice in Kenya. Based on the findings and conclusions of this study the following recommendation is made.

5.4.1 Ethical Procurement Practices

The study recommends that service state corporations in Kenya should strengthen the ethical code of conduct in their respective institutions to aid in monitoring ethical practices in procurement. The code of conduct framework will provide guidance to the agency values and cultural substance and set boundaries as to what is right and wrong in a given situation. The code of conduct should also stipulate severe legal actions in case of breach of procurement contracts.

The study established that confidentiality of supplier information is maintained by majority of service state corporations in Kenya. Consequently, since confidentiality is an area of potential abuse by the procurement staff, the study recommends for procuring entities to be diligent in in ensuring that confidentiality of bidder information is upheld at all times.

The study findings established that majority of the service state corporations practice fair competition with regard to tender award. However, this does not apply to all the service institutions as some disagreed with the statement on fair competition. The study therefore recommends for all the service state corporations to strictly adhere to the principle of fair competition by giving equal opportunity to all participants in public procurement, since any form of discrimination discourages participation and undermines any effort to achieve value for money through open competition.

On training to improve competency level, the study established that majority of service state corporation do not frequently organize trainings for their staff. Therefore, in order to promote on the competency level of the procurement staff, the study recommends for frequent trainings on public procurement for procurement practitioners to be updated on emerging trends in public procurement and supply chain management and to familiarize themselves with the several amendments made to the public procurement and Asset Disposals Act 2015. This will also help in developing a professional procurement cadre to carry out procurement to the highest standards and to ensure the delivery of services in accordance with government policies.

5.4.2 Tender Evaluation Process

The study findings revealed that majority of service state corporations have not fully embraced the e-tendering process as required by the government through procurement Act. Adoption of e-tendering by the state agencies will result in cost effective methods of promoting transparency through disseminated laws, regulations bidding documents, contract announcements and results of bid evaluations. This study therefore recommends for management of service state corporations to enforce e-tendering process as a best practice in cost reduction and in promoting transparency.

The study established that majority of service state corporations develop scoring methods for technical evaluation of bids. The study recommends that this practice should be strictly observed during the tender evaluation process as a way of ensuring fair competition thus, discouraging against the deliberate use of fake competition by favoring a particular bidder. In addition, the qualification criteria during the evaluation process should be stated in such a way that an assessment can determine whether the bid proposal is substantially responsible to the technical and commercial requirements.

The study recommends that, before any tender award, a market survey should be undertaken to enable the procuring entity compare the quoted prices against the prevailing market prices. This will enable the evaluation team to make an informed

decision by ensuring that the organization achieves value for money for the respective purchases.

During the evaluation process, lifecycle costing or total cost of ownership should be considered as a good practice not only to gain from cost saving point of view but also to ensure that quality of product is taken care of in financial quotation of bids. One of the basic rules in procurement is that in the end, it is important to think in terms of the total cost of ownership, which do not only include the purchase price, but also time and resources that are expended in pursuit of ownership.

5.4.3 Procurement Records Management

The study revealed that procurement files are created and are easily accessed when needed. This is important in ensuring that no procurement documents are lost. The study therefore recommends for effective records management, which would enable the organizations to make good decisions in procurement processes and to achieve good governance and accountability in their processes.

In order to ensure safety of procurement records, the study recommends that service state corporations to adopt data encryption methods. This will ensure that only authorized users access the procurement records. Data encryption will also enhance information confidentiality and government information security.

The study revealed that, staffs in charge of procurement records are not trained. This largely affects records management performance in public procurement entities. The study therefore recommends for service state corporations to organize for training on proper records management for staff in charge of procurement records to build capacity and adopt strategies for integrating and managing paper work and electronic records respectively.

5.4.4 Supplier Appraisal Practices

On supplier appraisal, the study recommends for continuous supplier appraisal to establish and maintain an adequate connection. Before engaging a supplier in any form of contract or agreement, he/she should be subjected to appraisal. The appraisal

done will ascertain; whether the supplier`s enterprise is valid in terms of registration and compliance, whether there are sales turnover of the enterprise over the last three years , the scale of borrowing and the ration of debts to assets, supplier capacity to perform and meet contract terms, and whether the supplier has met quality approval criteria of other organizations, such as Kenya Bureau of Standards (KEBs).

The study recommends for procuring entities in service state corporations to develop long-term relationship with the supplier. This will provide the opportunity for buyers to engage suppliers in a process of continual improvement of both products and services provided and of the accompanying service levels. The long term relationship will also promote mutual trust between the buying firm and the supplier thus enhancing an enabling environment for business.

5.4.5 Regulatory Framework

The Kenyan government has developed regulatory frameworks, which defines accountability measures, procedures, sanctions and institutional responsibilities for public procurement. The study recommends that services state corporations to strictly adhere to the laid down procedures as per the frameworks when carrying out public procurement to improve efficiency and Performance of Service State Corporation in Kenya.

5.5 Area of Further Research

The study outcome has revealed that further research should be carried out to determine the influence of public procurement implementation on performance of other state agencies. A review of literature indicated that there has been limited studies on public procurement implementation on operational performance of service state corporations in Kenya and Africa as a region. Thus, the finding of this study serves as a guide for future studies on influence of public procurement implementation in the public sector

This study has contributed to knowledge by establishing that the independent variables have significant influence on operational performance of service state

corporations in Kenya. The study has clearly pointed out the responsibility of regulatory frameworks on operational performance of service state corporations in Kenya. The findings and inferences made from this study are delimited to the constructs of ethical procurement practices, tender evaluation process, procurement records management and supplier appraisal practices and performance of service state corporations in Kenya.

Therefore, it is necessary for future researchers to undertake similar empirical studies in other state agencies which are not members of service state corporations in Kenya to validate the findings and conclusions of this study. The comparative future studies may also be undertaken in other public sector institutions like the county government in order to validate whether the findings and conclusions of this study can be generalized to the entire public sector procurement in Kenya. In addition, other factors that may not have been accounted for in the direct relationship as implied by the coefficient of determination may also warrant the attention of future researchers. This will enhance efficiency and sound public procurement hence reducing fraud, promoting fair competition, transparency, accountability and ensuring quality of goods works and services.

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APPENDICES

Appendix I: Introduction Letter

Collins Obura

Jomo Kenyatta University of Agriculture and Technology

P.O Box 62000-000200

Nairobi.

Dear Respondent,

RE: CONSENT FOR PROVISION OF ACADEMIC DATA

I am a PhD student at Jomo Kenyatta University of Agriculture and Technology conducting a research on public procurement implementation and operational performance of service state corporations in Kenya. This study is undertaken in partial fulfillment of the requirements for the award of PhD Degree in Supply Chain Management. I kindly request you to fill the attached questionnaire to help generate the data required for this study. This information will be used purely for academic purposes and the response provided will be treated with utmost confidentiality.

Your assistance is highly appreciated.

Yours Sincerely,

COLLINS OBURA

Appendix II: Questionnaire

Instruction

Below is a questionnaire you are required to fill. Kindly read carefully and give appropriate answer by placing a tick in the bracket [   ]. Where explanation is required, use the space provided below the item.

The information given will be used strictly for academic purposes only and will be treated with utmost confidence

Section A: Background Information

1. What is your age bracket? Below 25[   ], 25-40[   ], 41-50[   ], Above 50[   ]

2. What is your gender? (a)Male--------------------------- (b) Female--------------------- --

3. What is your level of education? (a) Diploma [   ], (b) Degree [   ], (c) Masters [   ]

Any other………………………………

4. What category is your organization

        a) Executive Agency   [   ]

        b) Independent Regulatory Authority   [   ]

        c) Research Institutions, Universities and Tertiary Institutions [   ]

5. What is your position in this organization?

        a) Audit Manager   [   ]

        b) ICT Manager   [   ]

        c) Procurement Manager   [   ]

SECTION B: **Ethical Procurement Practices**

Using a Likert scale from 1-5, please rate the extent to which you agree with the following statements

Key: Strongly Agree (SA) =5, Agree (A) =4, Neither Agree nor Disagree =3, Disagree (D) =2, Strongly Disagree (SD) =1

No.	Statement on Ethical process	5	4	3	2	1
1	High Integrity among procurement staff significantly reduces fraud in procurement					
2	Confidentiality is upheld at all times during the procurement process					
3	In all matters relating to the procurement work, fair competition is observed.					
4	Management frequently organizes for staff training to improve efficiency and Competence					

SECTION C: Tender Evaluation Process

Using a Likert scale from 1-5, please rate the extent to which you agree with the following statements

Key: Strongly Agree (SA) =5, Agree (A) =4, Neither agree nor Disagree =3, Disagree (D) =2, Strongly Disagree (SD) =1

No	Statement on Tender Evaluation Process	5	4	3	2	1
1	The agency has adopted e-Tender Evaluation Process which it uses in the opening of bids and tender evaluation					
2	Scoring method is developed for technical evaluation of bids					
3	Financial evaluation is based on Prevailing Market price					
4	Tender award transparent and is based on the tender evaluation report and professional opinion					

SECTION D: Procurement Records Management

Using a Likert scale from 1-5, please rate the extent to which you agree with the following statements

Key: Strongly Agree (SA) =5, Agree (A) =4, Neither Agree nor Disagree =3, Disagree (D) =2, Strongly Disagree (SD) =1

No	Statement on Procurement records management	5	4	3	2	1
1	Procurement records are created, filed and are easily accessed					
2	Procurement records are maintained and encrypt for safety purposes					
3	Staff in charge of procurement records trained					
4	Records are maintained in accordance with the requirements of ISO 15489 which is the international standard for information and documentation-records management					

SECTION E: Supplier Appraisal Practices

13. Using a Likert scale from 1-5, please rate the extent to which you agree with the following statements

Key: Strongly Agree (SA) =5, Agree (A) =4, Neither Agree nor Disagree =3, Disagree (D) =2, Strongly Disagree (SD) =1

No	Statement on Supplier appraisal practices	5	4	3	2	1
1	Due diligence done to ascertain compliance and material facts					
2	Risks of defects is reduced due to early supplier involvement in procurement process					
3	There is good channel of communication with suppliers					
4	Suppliers financial capability is analyzed before contract award					
5	Suppliers shows commitment to contract agreements					

SECTION F: Regulatory Framework

13. Using a Likert scale from 1-5, please rate the extent to which you agree with the following statements

Key: Strongly Agree (SA) =5, Agree (A) =4, Neither Agree nor Disagree =3, Disagree (D) =2, Strongly Disagree (SD) =1

No	Statement on Regulatory Framework	5	4	3	2	1
1	Internal auditors maintain sufficient independence and Due Professional Care when auditing procurement processes					
2	Procurement is effectively performed as per the public procurement and disposals Act 2015					
3	Proper selection of procurement method has enhanced achievement of value for money					
4	Proper budgeting done at the initial stage of procurement to help reduce pending bills					

SECTION H: Operational Perfomance Of Service State Corporations In Kenya

1. Using a Likert scale from 1-5, please rate the extent to which you agree with the following statements

Key: Key: Strongly Agree (SA) =5, Agree (A) =4, Neither Agree nor Disagree =3, Disagree (D) =2, Strongly Disagree (SD) =1

No	Statement on Operational Performance of Service State Corporation in Kenya	5	4	3	2	1
1	Service state corporations offer efficient procurement services as required by procurement law					
2	Easy access to information due to proper procurement records management					
3	Fair competition is practiced by the procuring entity					
4	Quality products and services are realized					
5	Cost reduction in acquisition of goods works and service is achieved					
6	Transparency in procurement is observed across the procurement cycle from need identification to disposal process					

Thank You for Your Response

Appendix III: List of Service State Corporations in Kenya

Executive Agencies:

1. Biashara Kenya

2. Internal Revenue Service

3. Kenya Intellectual Property Service

4. Kenya Investment Promotion

5. Konza Technopolis Authority

6. Bomas of Kenya

7. Water Services Trust Fund

8. Leather Development Council

9. Agricultural Development Corporation

10. Anti-Female Genital Mutilation Board

11. Constituency Development Fund

12. Crops Development and Promotion Service (new)

13. Customs and Boarder Security

14. Drought Management Authority

15. Export Processing Zones Authority (EPZA)

16. Financial Reporting Centre Proceeds of Crime and Anti-Money Laundering

17. Fisheries Development and Promotion Service (new)

18. Higher Education Loans Board Higher Education Loans Board Act, 1995.

19. Information and Communications Technology Authority

20. Investor Compensation Fund Board

21. Kenya Academy of Sports

22. Kenya Accountants & Secretaries National Examination Board (KASNEB)

23. Kenya Deposit Protection Authority

24. Kenya Ferry Services Ltd (KFS)

25. Kenya Film Development Service

26. Kenya Institute of Curriculum Development

27. Kenya Law Reform Commission

28. Kenya Medical Supplies Authority

29. Kenya National Bureau of Statistics# Executive Agency Enabling Legislandate

30. Kenya National Examination Council (KNEC)

31. Kenya National Highways Authority (KeNHA)

32. Kenya National Innovation Agency

33. Kenya Ordnance Factories Corporation

34. Kenya Roads Board (KRB)

35. Kenya Trade Network Agency Executive Order,

36. Kenya Wildlife and Forestry Conservation Service

37. Kenyatta National Hospital

38. LAPSSET Corridor Development Authority

39. Livestock Development and Promotion Service (new)

40. Local Authorities Provident Fund

41. Moi Teaching and Referral Hospital

42. Nairobi Centre for International Arbitration

43. National Aids Control Council State

44. National Cancer Institute of Kenya

45. National Coordinating Agency for Population & Development

46. National Council for Law Reporting

47. National Council for Persons with Disabilities

48. National Hospital Insurance Fund

49. National Industrial Training Authority

50. National Irrigation Board

51. National Museums of Kenya

52. National Quality Control Laboratories

53. National Social Security Fund

54. National Youth Council

55. Nuclear Electricity Board

56. Policy Holders Compensation Fund

57. Sports Kenya

58. The Kenya Cultural Center

59. Tourism Fund

60. Unclaimed Financial Assets Authority

61. Water Resources Management Authority

62. National Campaign against Drug Abuse Authority

Independent Regulatory Agencies

1. Agricultural, Fisheries and Food Authority

2. Commission for University Education

3. Communications Commission of Kenya

4. Competition Authority

5. Council for Legal

6. Energy Regulatory Commission

7. Health Services Regulatory Authority

8. Kenya Bureau of Standard (KBS)

9. Kenya Civil Aviation Authority (KCAA)

10. Kenya Film Regulatory Service

11. Kenya Maritime Authority

12. Kenya National Accreditation Service

13. Kenya Plant and Animal Health Inspectorate Service

14. Livestock Regulatory Authority

15. National Commission for Science, Technology and Innovations

16. National Construction Authority

17. National Environmental Management Authority (NEMA)

18. National Land Transport & Safety Authority

19. Public Benefits Organizations

20. Public Procurement Oversight Authority

21. Technical and Vocational Education and Training Authority

22. Tourism Regulatory Authority

23. Water Services Regulatory Board

24. Financial Supervisory Council

25. Mining and Oil Exploration Regulatory Service

Research Institutions, Public Universities, Tertiary Education and Training

Institutions

1. Bukura Agricultural College
2. Chuka University
3. Cooperative University College
4. Dedan Kimathi University
5. Egerton University
6. Embu University College
7. Garissa University College
8. Jaramogi Oginga Odinga University of Science and Technology
9. Jomo Kenyatta University of Agriculture and Technology
10. Karatina University # State Corporation Enabling Legislation Mandate Sector
11. Kenya Agricultural and Livestock Research Organization
12. Kenya Forestry Research Institute Science and Technology,
13. Kenya Industrial Research & Development Institute
14. Kenya Institute of Mass Communication
15. Kenya Institute of Public Policy Research & Analysis ((KIPPRA)
16. Kenya Marine and Fisheries Research Institute
17. Kenya Medical Research Institute (KEMRI)
18. Kenya Medical Training College (KMTC)
19. Kenya Multi-Media University
20. Kenya School of Government
21. Kenya School of Law
22. Kenya Utalii College (KUC
23. Kenya Water Institute
24. Kenyatta University
25. Kibabii University College
26. Kirinyaga University College
27. Kisii University
28. Laikipia University
29. Maasai Mara University

30. Machakos University College

31. Maseno University

32. Masinde Muliro University of Science and Technology

33. Meru University of Science and Technology

34. Moi University Enabling Legislation Mandate Sector

35. Murang.a University College

36. National Crime Research Center

37. Pwani University

38. Rongo University College

39. South Eastern Education, Science and Technology

40. Taita Taveta University College

41. Technical University of Mombasa

42. The Technical University of Kenya

43. University of Eldoret

44. University of Kabianga

45. University of Nairobi

Source: KNBS, (2013)