

**FUNCTIONAL INTEGRATION AND PERFORMANCE OF PROCUREMENT IN
PUBLIC INSTITUTIONS IN KENYA; CASE OF EMBU COUNTY GOVERNMENT**

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DECLARATION

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

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DEDICATION

I dedicate this research project to my lovely wife Joyce Wanjiku, my father Mr. J.Gachamu and my mentor, Hon. Martin Nyaga Wambora who have always motivated, encouraged and supported me in my studies.

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ABSTRACT

Using the Embu County Government as a case study, this research establish the effects of functional integration on the performance of public procurement in Kenyan government agencies. Slow progress has been made despite government attempts to set the technical infrastructure for electronic procurement. An integral part of electronic procurement, the Integrated Financial Management Information System (IFMIS) has only been adopted by a small percentage of counties by 2014. The Specific Objectives were to assess the effect of budgetary allocation on performance of public procurement in County Government of Embu, to evaluate the effect of top management support on performance of public procurement in County Government of Embu, to evaluate how staff competence affects performance of public procurement in County Government of Embu and to assess the effect of Information technology infrastructure on performance of public procurement in County Government of Embu with a broad focus on Kenyan public institutions and the County Government of Embu as an example, this study aimed to determine the effects of technology integration on procurement performance. More specifically, it sought to determine the effect of funding, managerial backing, employee skills, and IT infrastructure on procurement performance in the County Government of Embu. The Resource-Based View Theory, the Information Systems Success Theory, and the Innovation Diffusion Theory are three theories serve as the foundation for this study. This study made use of a descriptive research design. Three hundred workers were the intended subjects of the research. Collectively, these ideas provide a robust basis for understanding and assessing the event under investigation. A mix of qualitative interviews and quantitative surveys were used to gather data from suppliers, government officials, procurement officers, and other pertinent stakeholders. The County Government of Embu used a purposive sampling technique to choose its target population. While inferential analysis looked for connections between technology adoption and the highlighted parts of the purchasing process, descriptive analysis summed up and explained the findings. Surveys that participants filled out on their own time were used to gather information. Various quantitative and qualitative techniques were employed. Using SPSS software, descriptive and inferential statistics were evaluated. The study found that the proficiency of the personnel had a significant impact on the success of the procurement process. Staff members with the necessary skills are more likely to handle supplier relationships efficiently, negotiate favorable contracts, and follow all applicable procurement requirements. In order to keep procurement departments' skill levels high, the results demonstrate the importance of ongoing training and professional development. Even the most competent employees may fall behind in the rapidly developing field of procurement if they have not received sufficient training. The Embu County Government should address this by providing procurement professionals with ongoing training and development opportunities. Procurement officers require specialized training in areas including strategic supplier management, procurement legislation, and new technology. On top of that, keeping procurement professionals abreast of industry best practices is another benefit of fostering a culture of lifelong learning. Although this study has shed light on the elements impacting the County Government of Embu's procurement performance, there are still a number of topics that require more investigation. First, future studies could explore the impact of external factors such as political influence, economic instability, and legislative changes on procurement performance. Political instability and frequent regulatory changes can disrupt procurement processes, leading to inefficiencies that were not fully explored in this study.

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ABBREVIATIONS AND ACRONYMS

CIPD	Computer Industry Development Potential
IFMIS	Integrated Financial Management Information System
IPPD	Integrated Personnel and Pensions Database
UN	United Nations

OPERATIONAL DEFINITION OF TERMS

Budgetary Allocation

An allocation of funds within a budget. This refers to designating specific amounts of money for different programs, departments, or activities. It essentially divides the total budget resources into smaller portions for targeted spending.

Procurement Performance

Refers to the evaluation and measurement of how well an organization acquires goods and services. It boils down to how effective and efficient your procurement function is at getting you what you need.

Public Procurement

Means the process by which government agencies and public organizations acquire goods and services, as well as human labor, in order to fulfill their mission to the public. This includes activities like as defining needs, soliciting bids from vendors, reviewing proposals, selecting contracts, and supervising the delivery of goods or services. Making sure that taxpayer money is being used effectively and openly is what public procurement is all about.

Staff Competence

The knowledge, skills, and abilities of the personnel involved in public procurement. A competent workforce possesses a thorough understanding of relevant regulations, procurement processes, and best practices. They can effectively evaluate bids,

negotiate contracts, and manage procurement activities efficiently.

Top Management Support

The commitment and active endorsement provided by senior leadership within an organization for a particular initiative or program. In public procurement, strong top management support translates into clear policies, adequate resource allocation for the procurement department, and a focus on good governance practices.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This part provides a synopsis of the chapter as a whole as well as an overview of the study's methodology, limitations, goals, questions, importance, and scope in relation to technology.

1.1 Background of the study

In recent years, global operations strategies have been implemented to enhance competitiveness for modern businesses. To increase their competitiveness, public sectors are also seeking ways to improve services while minimizing environmental impact. This involves altering operational strategies, procedures, and technological frameworks, including the implementation of e-procurement systems. Businesses aim to adapt their operations, strategies, procedures, and technologies—such as information systems and the e-procurement model—to boost responsiveness, flexibility, and competitiveness (Elsevier, 2020).

For instance, in Europe, the public sector contributes 45% of GDP, with 15% spent on public procurement (Davis & Associates, 2007). Due to potential cost benefits, electronic procurement is a top priority for many countries implementing e-government (Popescu & Carayannis, 2003). Despite the advantages of public electronic procurement, Mitchell (2000) notes that any e-government initiative involves complex execution due to government size and bureaucracy (Devadoss, 2002). Madaney (2000) observes that Kenyan public institutions have lagged in keeping up with technological and global developments, necessitating more research and resources for technological advancements.

Institutions must transition from manual to online systems to remain financially viable (Oporo, 2014). To gain advantages seen in private companies, the public sector has adopted the IFMIS system (Panayiotou, Gayialis, & Tatsiopoulou, 2014). E-procurement has become essential for institutions in today's dynamic and competitive business environment (Wangui, 2013). An effective supply chain management system can deliver value to consumers and other stakeholders. Information systems are critical for efficient e-procurement, supporting decision-making, coordination, and control, and assisting managers and staff with problem analysis, visualizing complex ideas, and developing new products. Information systems comprise hardware and

software components that facilitate the creation, dissemination, processing, filtering, and gathering of data (Laudon & Laudon, 2006).

The use of electronic procurement by the County Government of Embu is the subject of this research. To make sure that the items bought provide the most value in terms of cost, quality, service, and innovation, the procurement team oversees connections with suppliers. For long-term viability, fair dealings, and mutually beneficial business transactions, it is essential to have solid connections with suppliers (EABL, 2011). In order to reap the rewards of solid supplier relationships, efficient information management is crucial. This study will assess how well the Embu County Government's e-procurement system was implemented, including how well it tracked transaction records to make data collection easier (Ogot, 2009).

The government of Kenya has ordered that all commodities, services, and public works be purchased online, even though e-procurement is already widely used by government organizations in the country. All county governments are mandated to undertake financial and procurement processes online by the National Treasury (2016). According to the United States Agency for International Development (2014), the government made sure that every county has the Integrated Financial Management Information System (IFMIS) installed in order to make things more efficient, accountable, and transparent.

1.1.1 Public Procurement

The primary goal of public procurement is to ensure the efficient and effective use of public funds, promoting transparency, accountability, and economy in purchasing practices (Lusuli, 2019). Governments are responsible for enforcing procurement regulations to ensure that public funds are utilized in a way that maximizes value for citizens. In Kenya, the procurement process has evolved significantly to address challenges such as inefficiency, corruption, and delays, leading to the development of digital solutions. The National Treasury (2016) reinforced these principles by mandating all public procurement and financial transactions be conducted online through the Integrated Financial Management Information System (IFMIS) across all 47 counties. This system is designed to streamline procurement, budgeting, and financial management processes, allowing

for real-time access to financial data to facilitate decision-making and improve public sector governance.

The digitalization of procurement through IFMIS also aligns with Kenya's commitment to achieving Sustainable Development Goals (SDGs), particularly SDG 12, which promotes sustainable consumption and production patterns. As Erica and Simeon (2020) indicate, public procurement constitutes a substantial portion of Kenya's GDP, accounting for about 26%. This high level of expenditure underscores the importance of an effective procurement system that minimizes waste and promotes sustainable practices. By reducing instances of corruption and ensuring that public projects are executed in a timely manner, IFMIS contributes to Kenya's efforts to meet both fiscal and environmental sustainability targets.

Public procurement in Kenya is not only concerned with economic efficiency but also with social and environmental considerations. Hansen (2020) developed a framework for public procurement that considers factors at multiple levels: individual practitioner, organizational, structural, and market levels. This multi-layered approach aims to create a more comprehensive and inclusive procurement process that incorporates best practices for sustainable development. For example, at the organizational level, transparency and accountability are emphasized, while at the practitioner level, ethical considerations guide decision-making. This framework allows for a holistic assessment of procurement activities, ensuring that they align with broader societal and developmental goals.

The shift to online procurement systems also aims to address issues related to procurement malpractice, which has historically been a challenge within Kenyan public agencies. Corruption, delayed projects, and budgetary inefficiencies have long plagued the procurement process, hindering effective public service delivery. By utilizing IFMIS, the Kenyan government has established a more transparent platform that provides checks and balances through automated monitoring and tracking. This digital transformation facilitates compliance with legal standards and helps procurement managers make better-informed decisions, thus curtailing wasteful spending and fostering a culture of integrity within the public sector (GOK, 2016).

1.1.2 County Government of Embu as Public Institution

The County Government of Embu, like other county governments in Kenya, has embraced the Integrated Financial Management Information System (IFMIS) as a core component of its procurement and financial management processes. The implementation of IFMIS is part of a broader national initiative to improve accountability, transparency, and efficiency across public financial management systems. According to the PPOA Interim Report (2009), IFMIS aims to minimize delays in tendering processes, reduce instances of corruption, and streamline project planning and execution. This has been particularly beneficial for Embu County, where adherence to electronic procurement practices has enabled more efficient resource allocation and reduced the time and costs associated with manual processes.

The leadership of Embu County, which includes the Governor, Deputy Governor, County Secretary, and Chief Officers, has been instrumental in driving the adoption of IFMIS. Their support has ensured that all 11 county departments, covering sectors such as agriculture, health, trade, and infrastructure, fully implement the system (GOK, 2014). Each department's use of IFMIS has enabled better financial oversight and streamlined budgetary processes, facilitating more effective resource management at the county level. For instance, by tracking real-time data on expenditures, Embu County can more accurately manage public funds and ensure that budget allocations are aligned with actual project needs.

The IFMIS system in Embu County has also promoted a standardized approach to financial management and procurement across the different departments. By integrating functions such as accounting, procurement, and reporting, IFMIS ensures a cohesive approach to public finance management. This standardization supports the county's goal of reducing bureaucratic hurdles and improving transparency in government spending. Additionally, by automating procurement functions, IFMIS reduces the risk of human error and manipulation in the procurement process, contributing to the county's efforts to combat corruption (Laudon & Laudon, 2016).

Moreover, the adoption of IFMIS aligns with the Kenyan government's broader vision for e-governance, which seeks to leverage technology to enhance public service delivery. For Embu County, e-procurement has resulted in greater accountability in the allocation of resources, as well

as improved collaboration between departments and with external vendors. Through IFMIS, county officials and procurement managers have a clearer overview of financial transactions and project expenditures, which enables more accurate reporting and accountability in line with national e-governance goals (CIO East Africa, 2014). This has helped improve trust in the county's financial practices and demonstrated a commitment to responsible governance.

The digitalization of public procurement in Embu County also reflects a strategic approach to sustainable financial management. By aligning with the Public Finance Management (PFM) reforms initiated by the Kenyan government, Embu County demonstrates its commitment to modernizing its operations to achieve greater fiscal responsibility. The reforms, aimed at strengthening accountability and reducing waste, require counties to use tools like IFMIS to monitor and report on expenditures accurately. This approach has proven essential in ensuring that the county's financial resources are utilized effectively, contributing to the overall goal of improved public sector governance (GOK, 2014).

1.1.3 Budgetary Allocation

Budgetary allocation refers to the process of distributing financial resources among various departments, projects, or initiatives within an organization or government. This allocation is based on priorities, projected needs, and strategic goals, ensuring that each area receives the necessary funding to operate effectively and achieve desired outcomes. Effective budgetary allocation is crucial for optimizing resource use and achieving overall organizational efficiency. For procurement technology integration, budgetary allocation requires a careful assessment of both costs and potential benefits. While the initial investment in e-procurement platforms, training, and infrastructure may appear substantial, long-term savings through increased efficiency, transparency, and reduced procurement errors can be significant. Cost-benefit analyses and pilot programs are essential to provide insights into the expected return on investment. Balancing short-term expenditures with long-term gains is critical, considering factors such as projected usage rates, anticipated efficiency improvements, and potential savings through enhanced negotiation and competition.

Research highlights the impact of budgetary allocation on procurement processes. For instance, a study by Gelderman et al. (2006) emphasizes that adequate budgetary allocations are vital for the successful implementation of e-procurement systems, leading to improved procurement efficiency and reduced operational costs. Another study by Thai (2001) underscores that strategic budgetary allocation can enhance procurement performance by providing the necessary financial support for adopting new technologies and training personnel. Factors such as historical data analysis, market research, and risk assessment play a significant role in informing budgetary allocation decisions. For the County Government of Embu case study, examining how the county allocates its budget across departments and how budgetary constraints influence decisions is essential. Additionally, understanding whether data analysis and market research inform these allocations provides a comprehensive view of the procurement system's strengths, weaknesses, and areas for improvement.

Analyzing the county's budget distribution, the influence of budgetary constraints on procurement decisions, and the use of data and market research in allocation practices offers valuable insights. By assessing these factors alongside public procurement processes, the study can provide a holistic understanding of the system's strengths and areas for potential enhancement. Budgetary allocation plays a critical role in procurement technology integration. By carefully balancing initial investments with long-term benefits and considering various influencing factors, organizations can optimize their procurement processes. The case study of Embu County Government will offer practical insights into effective budgetary allocation practices and their impact on public procurement efficiency and transparency.

1.1.4 Top Management Support

Top management support is often cited as the foundational element for successful procurement technology integration within public institutions. This support ensures alignment with strategic institutional goals and aids in the prioritization of resources, allowing for smoother and more effective implementation. When top management is actively engaged, there is a better chance that the integration process aligns with the organization's overall mission, creating cohesion between technology initiatives and the institution's objectives (Carter, 2021). Furthermore, top

management's role in setting a clear vision and supporting strategic goals makes procurement technology more than a logistical tool; it becomes an enabler of long-term organizational success.

Additionally, top management plays a key role in fostering a culture that embraces change and innovation. By promoting a positive attitude toward technology integration, they help mitigate resistance among staff and stakeholders. This cultural shift is essential, especially in public sector organizations where resistance to change is common due to rigid structures and long-established practices. Top management's visible endorsement and willingness to champion procurement initiatives help reduce resistance and promote a more adaptable organizational culture, which is essential for successful technology adoption (Brown & Johnson, 2020).

Risk management is another area where top management's involvement proves critical. The public sector often faces scrutiny regarding the use of taxpayer resources, and procurement technology implementations come with various financial and operational risks. Leaders who actively participate in risk mitigation efforts are better positioned to address potential issues early on, ensuring that these systems fulfill their objectives without exposing the organization to significant vulnerabilities (Allen et al., 2019). A proactive approach to risk management, led by top management, is thus essential to avoid failures that could lead to inefficiencies and public distrust.

In the case of the County Government of Embu, top management's role can be analyzed through policy documents, interviews with key stakeholders, and evaluation of transparency measures in place. By examining this variable, researchers can gain insights into how leadership affects the procurement process and identify specific areas where additional commitment may be needed to foster a culture of responsible procurement. Strengthening leadership's commitment in Embu could improve procurement efficiency and transparency, laying the groundwork for a more accountable and effective procurement system within the county.

1.1.5 Staff Competence

Staff competence plays a pivotal role in the success of procurement technology integration, particularly in ensuring that technology investments translate into effective outcomes. Competent personnel who receive appropriate training can maximize the system's potential, accurately

manage data, and resolve issues that arise during use (Green & Roberts, 2021). Without sufficient investment in training and knowledge-sharing, even the most advanced technology may be underutilized, resulting in missed opportunities for improved procurement efficiency and accountability.

Procurement staff are expected to have a diverse skill set that includes understanding relevant regulations, technical proficiency in procurement software, and the ability to negotiate contracts effectively. Skilled staff can make informed decisions that maximize value for money, ensure compliance with procurement laws, and mitigate risks associated with procurement activities (Thomas, 2020). In the public sector, where transparency and accountability are paramount, knowledgeable staff are critical in managing public funds responsibly and avoiding costly errors or instances of corruption.

To foster high levels of competence, organizations can offer ongoing training programs, create opportunities for professional development, and implement knowledge-sharing platforms. Such initiatives promote continuous improvement, allowing staff to stay up-to-date with evolving procurement practices and technology updates. By empowering staff through learning opportunities, organizations can create a resilient procurement team that adapts to changes in technology and regulatory requirements (Johnson, 2022). Empowering staff with continuous learning also boosts morale and increases engagement, which, in turn, can improve overall procurement performance.

For the County Government of Embu, staff competence can be examined through the review of training programs, interviews with employees, and an assessment of performance evaluation processes. By assessing the skill levels and training opportunities available, researchers can identify gaps and recommend initiatives to improve staff competence. This investment in skill-building is likely to result in more effective procurement outcomes and increased trust in the county's procurement processes.

1.1.6 Procurement Performance

Procurement performance is a critical aspect of public sector operations, influencing the efficiency, cost-effectiveness, and accountability of government service delivery. Effective

procurement performance is essential in ensuring that public funds are used wisely, with minimal waste and maximum impact on service delivery (Njoroge, 2019). By focusing on regulatory compliance, cost-effectiveness, product and service quality, and timeliness, government entities like the County Government of Embu can align procurement practices with broader organizational goals, thereby enhancing service delivery and operational efficiency.

A primary measure of procurement performance is the level of transparency and accountability in the procurement process. Transparency includes open documentation, clear bidding processes, and stakeholder involvement, all of which help reduce corruption risks and foster public trust (Njoroge, 2019). When procurement is transparent, stakeholders can track and evaluate each phase of the procurement process, ensuring that decisions are based on merit rather than external influences. This level of accountability is particularly important in the public sector, where the responsible management of taxpayer money is crucial for maintaining public confidence.

Procurement performance is also assessed through its impact on the organization's financial health and alignment with budget allocations. In Embu, for instance, effective procurement would mean adhering to budgetary limits and contributing to the county's strategic objectives, such as improving infrastructure or healthcare access (Erica & Simeon, 2020). Procurement practices that are closely aligned with the county's financial and strategic goals ensure that resources are allocated effectively and that every expenditure serves a public purpose. Thus, measuring procurement performance involves evaluating whether spending aligns with intended objectives and positively impacts the county's development.

Furthermore, procurement performance can be evaluated by examining key performance indicators (KPIs) like cost variation, supplier performance, and procurement cycle times. Cost variation measures whether the actual procurement costs deviate from the initial budget, while supplier performance assesses the reliability and quality of suppliers. Procurement cycle time, on the other hand, reflects the speed and efficiency of the procurement process (Thomas, 2021). Shorter cycle times can lead to faster service delivery and cost savings, both of which contribute to positive public perceptions of government efficiency. Monitoring these KPIs can help identify areas for improvement in procurement practices, ensuring that the county achieves maximum value from its investments.

In the case of the County Government of Embu, analyzing procurement performance through these indicators will provide insights into the system's effectiveness and efficiency. By identifying strengths and weaknesses in Embu's procurement processes, researchers can make recommendations to enhance performance, optimize resource use, and ensure procurement practices are aligned with public expectations and county goals.

1.2 Statement of the Problem

Public procurement in Kenya had long been plagued by inefficiency, lack of transparency, and vulnerability to corruption. Traditional paper-based processes were cumbersome and slow, creating opportunities for manipulation and fraud. While e-procurement promised substantial benefits, such as increased oversight, reduced transaction costs, and improved efficiency, its adoption by Kenyan counties remained slow and inconsistent. The slow uptake of e-procurement significantly hindered counties' ability to optimize resource allocation, enhance service delivery, and build public trust through improved transparency and accountability.

Despite government initiatives to establish technological infrastructure for e-procurement, progress was sluggish. By 2014, only a fraction of counties had successfully implemented the Integrated Financial Management Information System (IFMIS), a critical system for enabling e-procurement. Research by Heeks (2014) revealed that many counties had either failed to adopt e-procurement altogether or had achieved only partial implementation. This incomplete adoption limited the potential efficiency and oversight gains e-procurement could offer, leaving county governments struggling to meet the demands for improved service delivery and resource management.

Further evidence of the challenges in adoption was provided by Gitahi (2015), who highlighted that Kenyan organizations faced significant barriers to implementing and utilizing e-procurement technologies. These barriers included insufficient training, lack of funding, and inadequate technical support, all of which limited the capacity of counties to adopt the technology fully. Additionally, resistance to change, as identified by Orari (2014), further complicated the adoption process, making it difficult to transition from traditional procurement systems. The persistence of these challenges created a significant gap in understanding how to address the slow adoption of e-procurement in county governments.

This study focused on Embu County Government to examine the specific challenges faced in adopting e-procurement and the systems required for its successful implementation. Unlike previous research, which primarily discussed general adoption barriers, this study aimed to assess the county's readiness for e-procurement and to evaluate how functional integration could address these challenges. By doing so, the research addressed the knowledge gap related to understanding county-level adoption barriers in Kenya's public sector and offered practical recommendations for overcoming them.

While the problem centered on adoption rather than performance, the study also acknowledged that the lack of e-procurement adoption contributed to inefficiencies in performance. The traditional procurement processes continued to hinder the county's ability to ensure transparency, reduce fraud, and allocate resources effectively. The study thus sought to bridge the gap in understanding how county governments, like Embu County, could transition from limited or partial adoption to full implementation, thereby unlocking the efficiency and accountability promised by e-procurement systems.

By analyzing the unique challenges faced by Embu County, the study aimed to fill an existing knowledge gap regarding the practical steps required to promote e-procurement adoption in Kenya's county governments. It contributed to the growing body of literature on public procurement by offering insights into functional integration and its role in overcoming resistance, addressing technical barriers, and facilitating successful implementation of e-procurement.

1.3 Objectives of the Study

The general objective of the study was to establish how Functional integration and performance of procurement in public institutions in Kenya; case of Embu county government

1.3.1 Specific Objectives

- i. To assess the effect of budgetary allocation on performance of public procurement in County Government of Embu

- ii. To evaluate the effect of top management support on performance of public procurement in County Government of Embu
- iii. To evaluate how staff competence affects performance of public procurement in County Government of Embu
- iv. To assess the effect of Information technology infrastructure on performance of public procurement in County Government of Embu

1.4 Research Questions

- i. To what extent does budgetary allocation affects the performance of public procurement in County Government of Embu?
- ii. To what extent does top management support affects the performance of public procurement in County Government of Embu?
- iii. To what extent does staff competence affects the performance of public procurement in County Government of Embu?
- iv. To what extent does Information technology infrastructure affects the performance of public procurement in County Government of Embu?

1.5 Significance of the Study

The goal of this study is to determine ways to minimize the difficulties and maximize the advantages of government e-procurement deployment. The study's insights into the factors shaping suppliers' decisions on adopting or avoiding e-procurement could be pivotal for policymakers. Firstly, e-procurement implementation can yield substantial cost savings for government entities by streamlining processes, reducing paperwork, and boosting efficiency. Policymakers armed with an understanding of the factors driving suppliers' adoption could craft tailored incentives or support programs, thus optimizing cost-effectiveness.

Secondly, e-procurement systems often offer heightened transparency and accountability in the procurement realm, fundamental for bolstering public trust. Policymakers, cognizant of these adoption influencers, could strategize to fortify transparency and accountability across the procurement supply chain, thereby upholding integrity.

Thirdly, greater supplier uptake of e-procurement can foster competition and innovation within government procurement. Policymakers, by identifying and tackling adoption barriers, can cultivate an environment conducive to broader supplier participation, including SMEs and innovative startups, thereby enriching the procurement landscape.

Additionally, e-procurement systems serve as bulwarks against risks like fraud, corruption, and regulatory non-compliance. Armed with insights from the study, policymakers can fashion strategies to mitigate these risks by incentivizing suppliers towards e-procurement practices that prioritize transparency, accountability, and adherence to regulations.

Lastly, embracing e-procurement can amplify the efficiency and efficacy of government procurement processes, translating to better value for taxpayers. Policymakers, drawing upon study insights, can pinpoint avenues for streamlining procurement operations, thus enhancing overall efficiency and effectiveness.

Essentially, policymakers cannot do without the study's findings about the elements that affect suppliers' use of electronic procurement. They lay forth a plan to improve the efficacy and efficiency of government procurement systems while maximizing savings, strengthening accountability and openness, encouraging competition and new ideas, and reducing risks. Despite the rapid improvements in technology throughout the years, many developing nations have been left behind. Developed countries are thought to be better at public service in many ways because they have integrated ICT into their processes. The same could be true for less developed countries, especially in Africa. Businesses looking to cooperate with the government had more knowledge and resources about the investments needed to establish a strong integrated relationship and how to avoid common pitfalls.

Scholars interested in the risks inherent in public E-procurement and strategies for mitigating them should pay close attention to the study's discoveries. These findings not only offer valuable insights for future research in this domain but also highlight potential areas where existing literature may be lacking.

1.6 Scope of the Study

Examining the distribution of funds, personnel expertise, information and communication technology infrastructure, and support from upper-level management, this research seeks to assess the use of functional integration in public procurement by the County Government of Embu. The research evaluated the county's e-procurement system's overall efficacy and efficiency by looking at these variables. Financial resource distribution analysis, staff knowledge and skill evaluation, technical infrastructure assessment, and leadership's involvement in encouraging technology adoption are all within the purview of this topic area. A total of 300 county employees from the departments of information and communications technology (ICT), finance, committee, procurement, and stores participated in the research, which aimed to provide a thorough picture of the present situation and difficulties associated with digital integration in public procurement.

Geographically, the research is limited to the Embu County Government in Kenya, more specifically to the county seat of Kutus. Data collection, analysis, and reporting were all parts of the one-year study that ran from September 2023 to September 2024. The results of this review can help the county improve its public procurement procedures and e-procurement systems. This research intends to add to our knowledge of how to effectively use technology into public sector procurement by focusing on three key areas.

1.8 Chapter summary

Beginning with an overview of the study and its context, this chapter then lays out the study's goals, research questions, importance, scope, limits, and delimitations before wrapping up with a summary of the chapter's main points. The purpose of this research is to assess the efficacy of e-procurement technologies in facilitating public procurement by the County Government of Embu.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter examines the literature on the effects of technological integration on public procurement in Kenyan government agencies, focusing on the County Government of Embu. By reviewing the relevant scholarly literature, this section hopes to draw conclusions on the patterns, trends, and insights regarding the incorporation of technology into government procurement procedures. By reviewing and analyzing prior research, this chapter aims to give a comprehensive overview of the opportunities, challenges, and outcomes associated with incorporating technology into public procurement procedures. Furthermore, it explores the specific context of the County Government of Embu, offering insights into its unique experiences, initiatives, and lessons learned in leveraging technology for procurement efficiency and transparency. Through this review, readers will gain valuable insights into the broader implications and potential areas for improvement in technology-driven procurement practices within Kenyan public institutions, with specific reference to the case of Embu County.

2.1 Theoretical Literature Review

A research study's theoretical underpinnings can be found in its theoretical framework. According to Whitley (2001), the variables are more like abstract ideas than the characteristics of physical objects. What Sekaran and Bougie mean by "links between variables in a model" is that a theory should attempt to explain these linkages (2016). Theories provide a general explanation for occurrences, but they may be evaluated in real-world settings. The Resource-Based View Theory, the Information Systems Success Theory, and the Innovation Diffusion Theory are three prominent theoretical frameworks that serve as the foundation for this study. Collectively, these ideas provide a robust basis for understanding and assessing the event under investigation.

The Innovation Diffusion Theory, put forth by Everett Rogers, investigates the acceptance and propagation of innovations in both social and organizational contexts. Social networks, communication channels, innovative characteristics, and the perceived benefits and hazards of adoption are some of the aspects that are considered. With its roots in information systems research, the Information Systems Success Theory investigates the factors that determine the success or failure of IT deployments in businesses. Quality of the system, information, and

services, as well as their utilization, user satisfaction, and impacts on both individuals and businesses are among the many success aspects that are considered.

The Resource-Based View Theory draws on strategic management literature to emphasize the role of capabilities and resources in driving organizational performance and competitive advantage. Companies may sustain a competitive advantage over time, according to the argument, by making use of distinctive, valuable, non-replaceable resources and competences.

2.1.1 Innovation Diffusion Theory

The Innovation Diffusion Theory, introduced by Everett Rogers in 1962, provides a framework for understanding how new ideas, behaviors, or products gain acceptance within a social system over time (Rogers, 1962). According to Rogers, innovation encompasses any idea or practice perceived as new by individuals or groups within a society. This theory posits that innovations, whether technological advancements, procedural improvements, or entirely new products, drive growth by challenging traditional practices and introducing novel methods for addressing existing needs (Rogers, 2003). The key to successful diffusion lies in how effectively innovations are communicated and perceived within the target community, as these factors influence the speed and breadth of adoption (Rogers, 2003).

Rogers identified four critical elements in the innovation diffusion process: the innovation itself, the communication channels, time, and the social system. The innovation's attributes—such as its relative advantage, compatibility with existing values, complexity, trialability, and observability—affect its adoption rate (Rogers, 2003). Communication channels, both formal (e.g., media, advertising) and informal (e.g., peer discussions), play a central role in informing potential adopters about the innovation and shaping perceptions about its usefulness (Valente, 1996). The passage of time also influences the diffusion process, with innovations gradually gaining acceptance as their benefits become more evident (Mahajan, Muller, & Bass, 1990). Finally, the social system, comprising individuals, groups, or organizations, is integral, as its members can significantly influence others' willingness to adopt an innovation (Rogers, 2003).

A vital aspect of the Innovation Diffusion Theory is the classification of adopters into five distinct groups: innovators, early adopters, early majority, late majority, and laggards (Rogers, 1962).

Innovators are the first to embrace new ideas, driven by curiosity and willingness to take risks. Early adopters, who often hold influential positions within their social networks, are the opinion leaders who validate an innovation's value for others (Valente & Rogers, 1995). The early majority, more pragmatic and cautious, adopts only after observing its successful application (Rogers, 2003). The late majority, typically skeptical, adopts once the innovation has gained widespread acceptance and demonstrated reliability, while laggards, the most resistant to change, adopt only when the innovation becomes a norm within their social environment (Rogers, 2003).

The theory's adoption process consists of the stages of knowledge, persuasion, decision, implementation, and confirmation (Rogers, 2003). In the knowledge stage, individuals are first exposed to the innovation, gaining an understanding of its functions and benefits (Rogers, 1962). During the persuasion stage, they form attitudes about the innovation, often influenced by social interactions and information sources (Valente, 1996). The decision stage involves weighing advantages and disadvantages, followed by either adopting or rejecting the innovation (Mahajan et al., 1990). In the implementation stage, the individual begins using the innovation, exploring its practical application in real scenarios, and finally, in the confirmation stage, the decision is solidified as the innovation's value is validated, potentially influencing others to adopt it (Rogers, 2003).

One of the strengths of the Innovation Diffusion Theory is its emphasis on the role of social networks and peer influence in the adoption process. Rogers (2003) highlighted that interpersonal relationships, community ties, and the opinions of trusted peers strongly impact individual decisions. Innovations that align well with social values and are endorsed by respected figures within a network tend to spread more rapidly (Valente & Rogers, 1995). Consequently, understanding the social dynamics within a target population can be crucial for tailoring marketing strategies and communication efforts to foster adoption (Greenhalgh et al., 2004).

Additionally, the theory provides valuable insights for organizations introducing new technologies or processes. By categorizing adopters and identifying potential hurdles in each group, organizations can tailor their strategies to address the unique concerns and motivations of different adopter segments (Greenhalgh et al., 2004). For instance, engaging early adopters as champions or advocates can accelerate acceptance within the broader population (Rogers, 2003).

This staged approach, with targeted efforts for each segment, increases the likelihood of successful, sustained adoption within an organization or community (Valente, 1996).

Despite its extensive application, the Innovation Diffusion Theory is not without limitations. Critics argue that the theory oversimplifies complex social dynamics and individual decision-making processes by grouping adopters into fixed categories (Greenhalgh et al., 2004). Additionally, the model's emphasis on individual agency can overlook structural or environmental barriers that affect adoption, such as economic constraints, regulatory hurdles, or cultural resistance to change (Mahajan et al., 1990). Nevertheless, Rogers' theory remains influential, offering a foundational framework for understanding the spread of innovations in diverse settings, from technology and business to public health and social policy (Rogers, 2003).

2.1.2 Information Systems Success Theory

The original developers of the idea were DeLone and McLean (1992), building on work by Shannon and Weaver in the field of communications. By highlighting the interconnections between six crucial success factors, this theory seeks to offer a holistic view of IS success. It is usual practice to assess IT systems along these aspects. According to the previous model, there are six main components that must be present for information systems to be effective: systems quality, information quality, use, user satisfaction, individual impact, and organizational impact. The aforementioned hypothesis examines the role of information and communication technology in the implementation of the Integrated Financial Management Information System. Important here is the level of success that IFMIS has had with government entities.

You may look at the integration of technology from a different angle by using the Information Systems Success Model by DeLone and McLean. User happiness, system quality, information quality, net benefits, and actual system utilization are the six interrelated aspects that are taken into account in this approach. The key benefits include its adaptable approach that considers technical and user experience aspects, as well as its ability to provide valuable insights for improvement. Some criteria may be subjectively evaluated, and there may be a lack of context-specificity; these are limitations that must be considered.

2.1.3 Resource Based View Theory

The Information Systems (IS) Success Theory, originally proposed by DeLone and McLean in 1992, builds on the foundational communications work of Shannon and Weaver by seeking to conceptualize IS success in a multifaceted way (DeLone & McLean, 1992). DeLone and McLean proposed six critical components of IS success—system quality, information quality, use, user satisfaction, individual impact, and organizational impact—that collectively provide a holistic view of how information systems achieve effectiveness. These elements reflect a shift from simple operational metrics to a nuanced view that includes user experience, system performance, and organizational benefits, making this model highly adaptable across various domains and types of systems.

System Quality focuses on the technical aspects of the information system, including characteristics like reliability, responsiveness, and ease of use. DeLone and McLean (2003) argue that high system quality enhances users' ability to complete tasks efficiently and reduces frustration, making it crucial for system adoption and sustained use. System quality also includes factors such as system security, flexibility, and interface design, which affect user experience directly. For example, in an Integrated Financial Management Information System (IFMIS) used by government entities, high system quality would mean secure and reliable financial data processing with minimal errors, which are critical for maintaining public trust and transparency (Petter, DeLone, & McLean, 2008).

Information Quality addresses the relevance, accuracy, completeness, and timeliness of information generated by the system (DeLone & McLean, 2003). High-quality information is essential for effective decision-making and strategic planning. Within an IFMIS, this would mean ensuring that financial data reports are accurate, up-to-date, and formatted in a way that facilitates analysis. Government officials rely on quality data to make informed decisions about budget allocations, expenditures, and financial compliance. Therefore, ensuring that the information quality aligns with user expectations significantly affects user trust and system engagement (Seddon, 1997).

System Use and User Satisfaction are interrelated concepts central to the IS Success Model. System use refers to the extent to which users engage with the system, often influenced by system quality and information quality. DeLone and McLean (1992) suggested that the amount of system usage reflects the value that users perceive in the system. User satisfaction, on the other hand, is a measure of how well the system meets the needs and expectations of its users. Satisfied users are more likely to embrace a system and use it consistently, enhancing the system's effectiveness. For example, when IFMIS users find that the system provides reliable and relevant information, their satisfaction and likelihood of usage increase, ultimately contributing to individual and organizational impact (Petter et al., 2008).

Individual Impact examines how the information system affects the performance, productivity, and decision-making capabilities of individual users (Seddon, 1997). Effective systems empower users by providing tools and insights that streamline their workflows and improve their ability to make informed choices. For instance, IFMIS users who experience a positive individual impact may become more efficient in processing financial transactions and generating reports. Such improvements in individual performance can enhance organizational outcomes, demonstrating the critical connection between personal effectiveness and broader institutional goals (Petter et al., 2008).

Organizational Impact assesses how the system contributes to the overall goals and effectiveness of the organization (DeLone & McLean, 2003). An information system with a strong organizational impact can improve operational efficiency, enhance competitive advantage, and facilitate strategic decision-making. In a government context, the organizational impact of IFMIS might include enhanced transparency, improved resource allocation, and better financial governance. These outcomes reflect how information systems can transform organizational practices by promoting data-driven management, accountability, and streamlined operations, thus aligning IS success with broader institutional objectives (Petter et al., 2008).

One of the primary strengths of the IS Success Model is its adaptability. By integrating technical and user experience factors, the model provides a comprehensive framework applicable across industries, from healthcare to public administration. This adaptability allows organizations to modify the model's elements to suit specific contexts, assessing areas where an information

system might need improvement, such as increasing system responsiveness or enhancing user support (DeLone & McLean, 2003). Additionally, the IS Success Model's focus on both individual and organizational impact enables it to capture a wide range of potential system outcomes, from user satisfaction to institutional transformation.

However, some limitations have been noted. One common critique is the model's potential for subjective assessments, particularly regarding user satisfaction and organizational impact. Different users may perceive satisfaction in varying ways, and organizational impacts can be complex to measure and attribute solely to information system use (Seddon, 1997). Furthermore, the IS Success Model does not fully address contextual factors, such as cultural, regulatory, or industry-specific variables that may influence the success or failure of a system. For instance, government agencies may face unique regulatory challenges when implementing systems like IFMIS that private corporations do not encounter, necessitating modifications to the model (Petter et al., 2008).

Despite these critiques, the IS Success Model remains one of the most widely cited and applied frameworks for assessing information systems. Its relevance has persisted due to its ability to provide practical insights for improving system design, implementation, and evaluation processes. For example, organizations implementing new systems can use this model to guide their approach, ensuring that they prioritize both technical and user experience aspects to maximize the likelihood of success (DeLone & McLean, 2003). Ultimately, the IS Success Model's balanced approach to understanding information systems' multidimensional nature ensures its continued applicability across evolving technological landscapes.

2.2 Empirical Literature Review

Existing research papers, empirical evidence, and conclusions pertinent to the issue at hand are critically examined and synthesized in the empirical literature review part of this study. This section seeks to offer a thorough synopsis of the present knowledge in the topic by doing an in-depth investigation of scholarly sources such as peer-reviewed publications, reports, case studies, and more. The purpose of this review is to analyze the literature on the subject of technology integration's effect on public procurement practices with a focus on Kenyan public institutions and the County Government of Embu as a case study. The review aims to identify important

themes, trends, gaps, and points of agreement or disagreement. This part will contribute to the construction of a strong theoretical framework and offer useful insights for the empirical inquiry in this study through a careful review of empirical evidence.

2.2.1 Budgetary allocation and performance of public procurement

Empirical literature on the relationship between budgetary allocation and public procurement performance reveals varying insights, methodologies, and results, reflecting the complexity of public financial management. One such study, titled "The Impact of Budgetary Allocation on Procurement Performance in Public Institutions: A Case Study of Kenyan Counties," employed a quantitative research methodology, using structured questionnaires distributed among procurement officers in selected counties. The study aimed to assess how budgetary constraints influence procurement efficiency and effectiveness. The results indicated that inadequate budgetary allocations significantly hinder the procurement process, leading to delays, reduced quality of goods and services, and increased incidences of corruption due to pressure on procurement officials to cut corners (Mwangi & Kihara, 2019). The study highlighted that proper budgetary planning and timely allocation of funds are critical in ensuring the smooth operation of procurement activities.

Another relevant study, titled "Budgetary Allocations and Their Influence on Public Procurement Performance in Tanzania," used a mixed-method approach, combining qualitative interviews with key stakeholders in procurement and quantitative analysis of procurement records from various public institutions. The research focused on how the timing and adequacy of budgetary allocations affected procurement performance metrics such as cost efficiency, transparency, and supplier relationships. The findings revealed that delays in budget disbursement were a major challenge, leading to procurement inefficiencies, such as rushed processes that compromise quality and inflate costs (Lusambo, 2020). This study emphasized the importance of aligning budgetary processes with procurement cycles to enhance procurement performance, suggesting that timely and adequate funding is essential for achieving procurement objectives.

A third study, "The Role of Budgetary Controls in Enhancing Procurement Performance in Ugandan Public Sector," adopted a case study methodology, focusing on a single public institution over a two-year period. Interviews with procurement employees and records analysis were among

the quantitative and qualitative data-gathering techniques used in the study. The results indicated that stringent budgetary controls, while necessary, could sometimes lead to bureaucratic delays that negatively impact procurement performance (Nabukeera & Kaggwa, 2018). The study found that while budgetary controls are crucial for preventing overspending, they must be balanced with flexibility to allow procurement officials to respond to unforeseen circumstances without compromising procurement outcomes.

The literature indicates that the relationship between budgetary allocations and procurement performance is not always linear or predictable. Studies have shown that, in some instances, even adequately allocated budgets may fail to translate into procurement efficiency if disbursement procedures are delayed or bureaucratic (Aboagye & Asamoah, 2019). This suggests that while budget size is an important factor, the management and timing of budget release are equally critical. For example, Aboagye and Asamoah's (2019) study on Ghana's public procurement process revealed that delays in budget disbursement led to rushed procurement decisions, sometimes resulting in overspending or procurement of substandard goods. This emphasizes the need for improved budget disbursement procedures to prevent time lags that could affect procurement outcomes.

In addition to budgetary allocation and timing, the impact of budgetary policy flexibility on procurement performance has been highlighted in several studies. Research by Banda and Phiri (2021) on public procurement in Malawi demonstrated that overly rigid budgetary policies limited procurement managers' ability to adapt to market changes, leading to cost inefficiencies and lower procurement quality. They argued that budgetary frameworks that allow a degree of flexibility enable procurement departments to respond to unexpected price fluctuations or supply shortages. This flexibility ensures that procurement processes remain aligned with changing economic conditions, ultimately improving performance (Banda & Phiri, 2021).

Moreover, the role of procurement laws and regulations as moderating factors in the relationship between budget allocation and procurement performance is increasingly recognized. A study by Karani and Mutiso (2021) in Kenya's public procurement sector examined how regulatory compliance requirements, such as mandatory tendering procedures and competitive bidding, can either mitigate or exacerbate budgetary limitations. Their findings indicated that while regulations

aim to enhance transparency and fairness, they can sometimes add to procurement delays, especially in cases where budgetary constraints already exist. Understanding this dynamic is essential for policymakers seeking to design regulations that support, rather than hinder, effective procurement practices (Karani & Mutiso, 2021).

Compared to the above studies, my research will adopt a more comprehensive approach by not only examining the direct effects of budgetary allocations on procurement performance but also exploring the moderating role of procurement policies and regulatory frameworks. For example, while Mwangi and Kihara (2019) focused primarily on the impact of budget constraints, my study will also consider how procurement laws and regulations can either mitigate or exacerbate the effects of budgetary limitations. This will provide a more nuanced understanding of the factors that influence procurement performance in public institutions.

Additionally, my study will incorporate a broader geographical scope and a more diverse sample size. Whereas Lusambo's (2020) study was limited to a few selected institutions within Tanzania, my research will encompass multiple counties across Kenya, offering a comparative analysis of different budgetary practices and their impact on procurement performance. This approach aims to provide more generalizable findings that can inform policy decisions at both the county and national levels.

Finally, while Nabukeera and Kagawa (2018) focused on the effects of budgetary controls within a single institution, my study will examine the interplay between budgetary allocations, procurement controls, and performance across various public institutions. By doing so, the research seeks to identify best practices and potential pitfalls in budgetary management that can either enhance or undermine procurement performance. Public sector procurement experts and legislators will benefit from the practical insights provided by this, which will add to the current body of knowledge.

2.2.2 Top management support and performance of public procurement

Research on the effects of assistance from upper-level management on public procurement performance can shed light on the connection between leadership involvement and successful outcomes. Research conducted by Kamau et al. (2021) on the topic of "Impact of Top

Management Support on Public Procurement Performance: A Case of Nairobi County" employed a descriptive research strategy and relied on structured questionnaires to gather data from procurement officers and top management within the county government. Procurement strategy, execution, and compliance with regulatory frameworks were substantially enhanced by leadership commitment, and there was a strong positive correlation between procurement success and support from senior management. The study found that when top-down involvement in procurement processes is increased, public procurement becomes more efficient, transparent, and accountable.

The mixed-methods study by Ochieng and Wanjala (2020) on "Top Management Support and Public Procurement Performance in Developing Countries: Evidence from Uganda" also drew from relevant sources; it interviewed procurement officers from different government departments and used quantitative surveys. According to the results, e-procurement systems and procurement changes cannot be successful without the backing of upper management. Specifically, the study highlighted that management's provision of resources, policy direction, and oversight directly contributed to the reduction of procurement cycle times and increased compliance with procurement laws. The research emphasized that without strong management backing, procurement initiatives are likely to encounter resistance, delays, and inefficiencies.

Similarly, a study titled "The Role of Leadership in Enhancing Public Procurement Performance: Insights from South Africa" by Nkosi and Ncube (2022) used a case study methodology, focusing on multiple public entities within South Africa. Through in-depth interviews and analysis of procurement records, the study found that top management's strategic vision and support played a pivotal role in aligning procurement activities with organizational goals. The study also noted that management's commitment to fostering a culture of ethical procurement practices was instrumental in minimizing procurement-related fraud and corruption. The research concluded that leadership support not only boosts procurement performance but also instills a sense of ownership and accountability among procurement staff.

In addition, top management's role in promoting staff development and training has been identified as a critical factor in procurement success. According to Mulwa and Kimani (2020), effective training programs endorsed and funded by senior management enhance procurement

officers' skills and knowledge, thus fostering better compliance and efficiency. This study, focused on Kenya's national procurement bodies, demonstrated that procurement staff equipped with the latest skills and knowledge are more likely to meet regulatory standards and adopt innovative practices. Top management's active role in supporting continuous learning also encourages a proactive culture within procurement departments, making it easier to adapt to new policies or technologies.

Furthermore, leadership support often extends beyond resource provision to include strategic guidance and risk management in procurement processes. A study by Kibet et al. (2021) on Kenyan public universities highlighted that when top management actively participates in risk assessment and mitigation planning, procurement processes experience fewer disruptions and reduced incidences of wastage. The research noted that management's involvement in identifying and addressing procurement risks, such as supply chain interruptions or vendor non-compliance, creates a more resilient and adaptable procurement function. This support allows procurement teams to operate efficiently, even in dynamic environments, thus aligning procurement performance with organizational stability.

While these studies collectively underscore the importance of top management support in enhancing procurement performance, my study differs in its focus on the specific mechanisms through which management support is operationalized within the context of public procurement in Embu County. Unlike the reviewed studies, which broadly examine the relationship between top management support and procurement outcomes, my research will delve into the specific actions, strategies, and policies employed by top management to support procurement processes. This includes a detailed analysis of how management's involvement in procurement planning, resource allocation, and policy enforcement directly influences procurement efficiency and compliance.

Furthermore, my study will employ a longitudinal research design, allowing for the observation of changes in procurement performance over time as a result of management interventions. This is in contrast to the examined publications' use of cross-sectional designs, which offer just a momentary glimpse into the connection between management support and procurement success. Through the use of longitudinal data monitoring, my study seeks to elucidate the relationship

between top-down assistance and procurement outcomes, with the hope of shedding light on how public procurement might benefit from ongoing management engagement.

In addition to examining the methodological variations, my study will delve into the impact of exogenous variables like regulatory shifts and economic circumstances on the link between procurement performance and support from upper management. This aspect is not extensively covered in the reviewed studies, which primarily focus on internal organizational dynamics. By incorporating external factors, my research will offer a more nuanced understanding of the challenges and opportunities faced by top management in supporting procurement functions in a public sector setting, thereby contributing to the broader literature on public procurement management.

Finally, my study will explore the influence of organizational culture on the effectiveness of management support in public procurement. Leadership support is often more effective when aligned with an organization's values and norms (Carter & Lamont, 2022). In Embu County's case, understanding how the procurement team perceives and responds to managerial interventions may reveal important cultural facilitators or barriers. By examining cultural factors alongside managerial actions, this research aims to provide insights into how an organization's culture interacts with management support to shape procurement outcomes.

2.2.3 Evaluate how staff competence and performance of public procurement

Multiple empirical studies have shed light on the elements that motivate public sector firms to be efficient with their procurement by assessing the impact of staff competency on procurement performance. Staff competency and procurement performance in public institutions were investigated in a paper titled "Factors Affecting Procurement Performance in Public Institutions: A Case of Nairobi County" (2021) by Mwangi. Data for the study came from structured questionnaires administered to procurement officials in Nairobi County; the research strategy was descriptive, and the technique was survey-based. The study found that a staff's technical skill set and familiarity with procurement legislation substantially impacted the efficacy and efficiency of procurement procedures. However, the study also discovered that lack of continual professional development may cause the beneficial impacts of initial competency to fade over time, indicating

that continuous training and development programs are essential for sustaining high levels of employee competence.

The 2020 paper by Ouma and Omondi titled "Impact of Human Resource Practices on Public Procurement Performance: Evidence from Kenyan Public Entities" is another pertinent study. The researchers in this study used a mixed-methods approach, combining quantitative survey data with qualitative insights from in-depth interviews with procurement managers. The study's primary focus was on the effects of human resource practices on procurement outcomes, including activities such as recruitment, training, and performance evaluation. Findings revealed that well-structured recruitment processes, along with regular training and clear performance metrics, were essential in enhancing procurement performance. This study emphasized that staff competence, when bolstered by effective human resource practices, led to better decision-making, reduced procurement cycle times, and improved supplier relationships. These results underscore the importance of a holistic approach to human resource management in achieving procurement excellence.

In contrast to these studies, "Procurement Performance in Public Institutions: The Role of Employee Competence and Organizational Culture" by Kariuki (2019) utilized a case study methodology, focusing on a single public institution in Kenya. Data were gathered through interviews, document reviews, and direct observations, allowing for an in-depth exploration of how staff competence interacts with organizational culture to influence procurement performance. The findings highlighted that while individual competence is essential, organizational culture—such as support for innovation and adherence to ethical standards—plays a significant role in either enhancing or impeding the impact of staff competence on procurement outcomes. Kariuki's study adds an essential dimension to our understanding by showing that even highly competent staff may struggle to achieve optimal procurement performance without a supportive organizational culture.

The studies reviewed provide essential insights into the relationship between staff competence and procurement performance; however, my study diverges in its specific focus and scope. Unlike Mwangi's (2021) broad analysis of procurement performance in Nairobi County, my research will investigate the role of staff competence within Embu County Government, addressing unique

challenges and opportunities specific to this region. Additionally, my research will employ a longitudinal design, enabling observation of changes in procurement performance over time as a result of targeted interventions aimed at enhancing staff competence. This approach provides a more dynamic understanding of how competence impacts procurement performance, particularly in response to focused training programs and policy modifications.

While Ouma and Omondi's (2020) emphasis on human resource practices highlights the importance of recruitment, training, and performance evaluation, my study will delve further into the specific competencies that are most critical for effective procurement. By focusing on skills such as risk management, ethical judgment, and technological proficiency, my research aims to provide more granular insights that can guide the development of tailored professional development programs for procurement staff in Embu County. This focus on targeted competencies, combined with the longitudinal nature of my study, distinguishes my research from prior work, offering a more detailed and time-sensitive perspective on how specific competencies affect procurement performance.

Moreover, Kariuki's (2019) emphasis on organizational culture provides a valuable context for my study, as I intend to explore the interaction between staff competence and organizational factors in greater depth. My research will examine not only how competence affects procurement performance but also how elements of organizational culture, such as leadership support and ethical climate, moderate this relationship. This nuanced approach enables a more comprehensive understanding of the conditions under which staff competence can be leveraged most effectively to enhance procurement performance, contributing new insights to the literature on public procurement.

Further, my study will address an additional dimension by examining the role of cross-functional collaboration within public procurement. In many public institutions, procurement processes involve coordination across multiple departments, requiring staff to possess both interpersonal and collaborative skills alongside technical expertise. By including cross-functional collaboration as a factor, my research will highlight how the effectiveness of procurement staff is influenced by their ability to work within interdepartmental teams, thus broadening the understanding of staff competence beyond individual skills. This perspective is particularly relevant in Embu County,

where resource constraints make interdepartmental cooperation crucial for optimizing procurement efficiency.

Additionally, my study will investigate the impact of digital competence on procurement performance in public institutions. With increasing emphasis on e-procurement systems to improve transparency and reduce inefficiencies, proficiency in digital tools has become essential for procurement staff. Previous studies have not focused extensively on digital literacy and technological proficiency as core competencies in public procurement. By examining digital competence as a key skill in procurement, my research will provide insights into how training in digital literacy could enhance efficiency and reduce error rates in procurement activities, especially in resource-limited public institutions like those in Embu County.

Lastly, my study will incorporate an evaluation of feedback mechanisms within public procurement processes. Effective feedback systems allow procurement staff to learn from past procurement activities, continuously improving processes and addressing areas of weakness. By analyzing how feedback mechanisms impact procurement staff's ongoing learning and adaptability, my study aims to offer recommendations on structuring these systems to maximize procurement performance. This focus on feedback and continuous improvement adds a unique perspective to the analysis of staff competence, as it emphasizes the need for public institutions to invest in ongoing learning and development beyond initial training programs.

2.2.4 Information technology infrastructure and performance of public procurement

The importance of IT infrastructure in improving the efficiency of government procurement processes has garnered significant attention in academic and policy circles. One prominent study, "The Impact of Information Technology on Public Procurement Performance" (2021) by Mwangi and Kiarie, examined how IT infrastructure can enhance the efficiency of public sector procurement in Kenya. This mixed-methods study combined quantitative data from 120 procurement officers across various counties with qualitative insights from senior procurement managers. The study revealed that robust IT infrastructure substantially improves procurement efficiency by reducing transaction costs, increasing transparency, and streamlining processes. These findings underscore the potential for IT systems to play a transformative role in public

procurement by simplifying complex procedures and making operations more accessible and accountable (Mwangi & Kiarie, 2021).

Another notable study, "Evaluating the Effect of E-Procurement on Public Procurement Performance in Developing Countries" (2020) by Opiyo and Ngugi, explored the relationship between e-procurement systems and procurement performance in East Africa. This research used a quantitative survey of 150 procurement specialists from various government departments and employed regression analysis to establish links between e-procurement adoption and procurement efficiency. According to the results, e-procurement systems significantly enhanced procurement performance, especially through shorter procurement cycles and improved supplier relationships. However, the study identified barriers, such as insufficient IT infrastructure and inadequate training, which hindered the full realization of e-procurement benefits, highlighting the need for a more supportive infrastructure and training programs to maximize e-procurement's potential (Opiyo & Ngugi, 2020).

In a complementary investigation, Mutuku's "Information Technology and Public Procurement: Challenges and Opportunities" (2019) focused on the obstacles Kenyan government agencies face in integrating IT systems into procurement. Using a case study approach, Mutuku conducted interviews with procurement officials and IT experts at three major public organizations. The findings revealed that system integration issues, cybersecurity risks, and resistance to change were among the primary challenges hindering the effectiveness of IT infrastructure in public procurement. Despite the potential for IT systems to enhance procurement processes, these challenges often led to suboptimal performance and reduced efficacy of IT systems. This study emphasizes the complexity of implementing IT in government procurement, as well as the need for robust strategies to address integration and security concerns (Mutuku, 2019).

This current research seeks to expand on existing literature by exploring how organizational culture moderates the relationship between IT infrastructure and procurement efficiency. Unlike previous studies that focus primarily on the direct impact of IT infrastructure, this study will examine the role of company culture as an influencing factor in the successful deployment of IT systems within government contracts. By incorporating organizational culture into the analysis, the research aims to offer a nuanced view of the elements that contribute to effective IT adoption

in public procurement. Organizational culture can significantly affect employee attitudes, adaptability, and the level of support for IT initiatives, which are essential for the seamless integration and utilization of IT infrastructure (Jones et al., 2020).

Methodologically, this study diverges from prior research by adopting a longitudinal design alongside cross-sectional surveys. Longitudinal data analysis will provide insights into how procurement performance evolves over time, capturing the long-term impacts of IT infrastructure on procurement efficiency. This approach addresses the limitations of cross-sectional data, which may not fully reflect the dynamic nature of IT infrastructure implementation and its effects on procurement outcomes. By examining changes over time, this study aims to offer a more comprehensive understanding of IT infrastructure's role in public procurement performance, allowing policymakers to identify trends and make informed decisions about future IT investments (Smith & Clark, 2022).

Additionally, this study intends to investigate the potential of emerging technologies, such as blockchain and artificial intelligence (AI), in revolutionizing public procurement. Most prior research has concentrated on traditional IT systems, such as e-procurement platforms, which, while effective, have limitations. Blockchain technology, with its emphasis on transparency and traceability, can address common procurement issues, such as fraud and lack of accountability. AI, on the other hand, offers opportunities for enhancing procurement efficiency by automating routine tasks and providing data-driven insights for decision-making. This study will evaluate how these cutting-edge technologies could further optimize procurement processes and mitigate some of the challenges identified in previous studies (Carter et al., 2021).

By incorporating these advanced technologies into the framework, the research also seeks to provide actionable recommendations for practitioners and policymakers involved in digital transformation within public procurement. As public sector organizations move towards digitalization, understanding how blockchain and AI can complement existing IT infrastructure will be crucial for improving procurement efficiency and addressing challenges related to transparency, security, and process automation. This approach aligns with the global trend towards smart governance, where public services are increasingly being enhanced through innovative technology solutions (Dunleavy et al., 2019).

Ultimately, this study aspires to contribute to the growing body of knowledge on digital transformation in public procurement by shedding light on both the direct and moderating factors that influence IT effectiveness. By exploring the intersection of organizational culture, advanced technologies, and IT infrastructure, this research will provide a comprehensive perspective on achieving optimal procurement performance. Insights from this study could guide public sector organizations in designing strategic frameworks that maximize IT benefits and facilitate smoother transitions in the rapidly evolving digital landscape of public procurement (De Boer & Telgen, 2023).

2.3 Summary and Research gaps

Table 1: Summary and Research gaps

Study	Focus of the Study	Methodology	Main Findings	Knowledge Gaps	Focus of the Current Study
Lemarleni et al. (2019)	Budget allocation and usage in Kenya Police Service	Quantitative analysis	Positive association between financial resources, budget usage, and allocation	Limited research on how budgetary constraints affect e-procurement implementation	Assess how budgetary allocation impacts the performance of public procurement in the County Government of Embu
Vaidya et al. (2019)	E-procurement implementation in public sector enterprises	Qualitative and quantitative	Importance of top management support for successful e-procurement adoption	Insufficient focus on sustained top management support for e-procurement systems	Evaluate the impact of top management support on public procurement performance in the County

					Government of Embu
Mose (2019)	User acceptance and training in e-procurement systems	Mixed methods	Highlighted critical significance of user competency for successful e-procurement implementation	Lack of detailed analysis on the influence of staff training and competence on e-procurement effectiveness	Investigate the effect of staff competence on public procurement performance in the County Government of Embu
Gitahi (2011)	IT infrastructure in e-procurement success	Qualitative study	Need for personalized, complete, relevant, comprehensible, and secure online content for e-procurement success	Limited examination of how IT infrastructure impacts the efficiency of public procurement processes	Assess the role of IT infrastructure in public procurement efficiency in the County Government of Embu
Juliet Wambui Njoroge (2019)	Factors affecting procurement in Embu County Government	Descriptive research design	Importance of a competent workforce, ethical practices, and utilization of information technology	Scarcity of studies linking specific e-procurement components to overall procurement performance	Measure procurement performance in terms of accountability, service delivery, and cost-efficiency, linking to e-

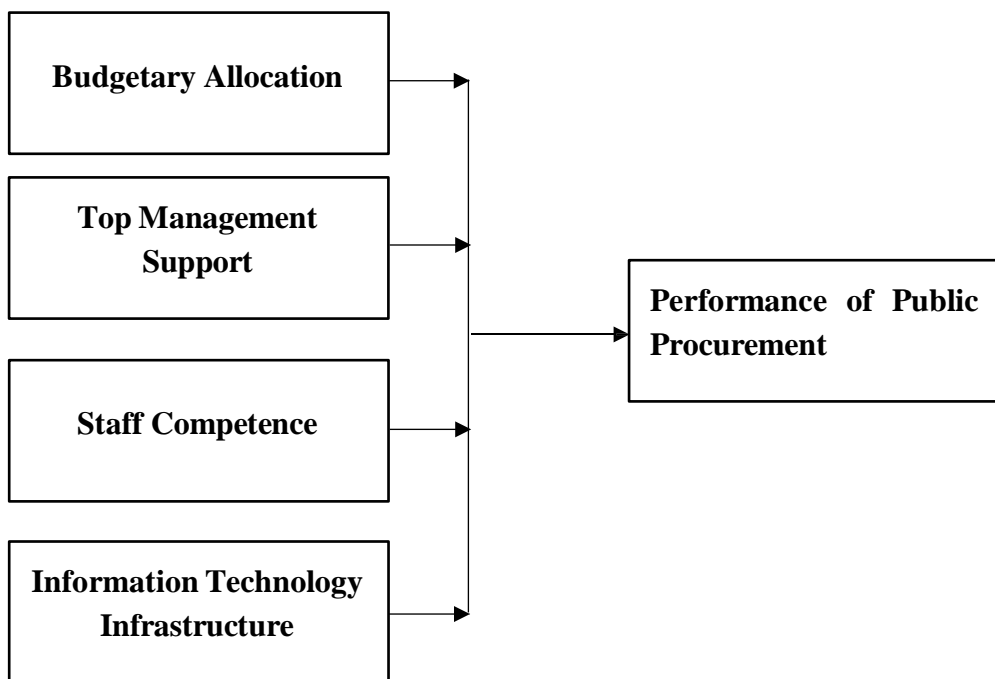
2.4 Conceptual framework

Conceptual frameworks can be represented graphically or in writing and outline the key concepts, variables, and relationships in a research project. It acts as a road map, directing the investigation and guaranteeing a comprehensive comprehension of the interplay between various elements within the phenomenon under investigation.

Independent Variables

Dependent Variable

2.4 Conceptual framework



Source: Author, (2024)

Figure 1: Conceptual Framework

2.5 Operationalization of Variables

The research questions that guide the operationalization of the study's variables will be used to analyze the link between the independent and dependent variables. Financial resources, employee expertise, backing from upper management, and the state of the IT system are the separate variables. In addition, the research will detail the operationalization by providing the variables' types, levels, measurement, scale, data collecting, and analytical technique.

Variable	Variable type	Indicators	Measurement	Analysis Tool
Budgetary Allocation	Independent	<ul style="list-style-type: none"> • Funding adequacy • Technical financial impact • Operations cost • Return on Investment 	<ul style="list-style-type: none"> • Likert Questionnaire 	<ul style="list-style-type: none"> • Descriptive and inferential analysis
Top Management Support	Independent	Resource allocation Strategic alignment Change management Performance measurement and monitoring	<ul style="list-style-type: none"> • Likert Questionnaire 	<ul style="list-style-type: none"> • Descriptive and inferential analysis
Staff Competence	Independent	Career development Training Professionalism Academic qualifications	<ul style="list-style-type: none"> • Likert Questionnaire 	<ul style="list-style-type: none"> • Descriptive and inferential analysis
Information Technology Infrastructure	Independent	Technical support System security	<ul style="list-style-type: none"> • Likert Questionnaire 	<ul style="list-style-type: none"> • Descriptive and inferential analysis
Performance of public procurement	Dependent	Accountability and Transparency Improved Service Delivery Improved Performance	<ul style="list-style-type: none"> • Likert Questionnaire 	Inferential analysis

Source: Author, (2024)

Table 2.1 Operationalization of Variables

2.6 Chapter Summary

The literature review was covered in this chapter to provide background information on the research issue and to help readers grasp the theory so that it may be sufficiently explored. The researcher was able to condense the concepts and body of knowledge in the field and then make recommendations for future work based on the literature study. The researcher has covered a number of topics in the debate, including the conceptual framework, operationalization of variables, description of holes to be filled, theoretical and empirical literature reviews, and chapter summaries.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Methods for analyzing the study are detailed in this chapter. Included are the following: who the study is intended to reach, how it will be conducted, what data will be collected, how it will be presented, what tools were used, what ethical considerations were made, and a brief summary of the chapter.

3.1 Research Design

The research design describes the strategy and methodology that was used to carry out the study, including the procedures and tools that were utilized to collect, measure, and analyze data. Research designs outline the steps needed to successfully conduct a research endeavor (Council and Schindler, 2014). Gupta (2015), who both offer an overview of the essential steps, characterizes as a thorough approach that details the study's methodologies by Kothari (2019) and as the "fundamental strategy" it.

A descriptive research design was used in this work. Relationships and the world as it is can be best described by descriptive study, which can answer questions like "what is" and "what was." The major goal of descriptive research is to determine the who, what, where, when, and how much of anything, as pointed out by Cooper and Schindler (2014). To determine what percentage of a population possesses a certain trait or to define occurrences within that group are the overarching goals of descriptive research.

To determine the scope of certain difficulties, descriptive study designs are used, according to Mugenda & Mugenda (2013). According to their argument, descriptive designs with larger dispersion variables reveal discrepancies throughout the society and provide important signals on what needs further investigation. Data collection in a descriptive approach often makes use of questionnaires or in-depth interviews with a representative sample of the population (Orodho, 2014). This method is useful for collecting data on people's attitudes, habits, and beliefs as well as other societal issues.

According to Ododho and Kombo (2014), descriptive research basically entails describing the present state of affairs. According to Sekaran (2014), the purpose of descriptive research is to

identify and describe the characteristics of the relevant variables in a given context. Orodho and Kombo (2014) claim that this technique is appropriate for comprehending the features and relationships of variables in a certain context, and this method is in line with their assertions.

3.2 Target Population

When doing research, it is common practice to refer to the people, organizations, things, events, or families that will be the focus of the study as the population. A population's heterogeneity is indicated by the fact that it is described by Kombo and Tromp (2014) as inclusive of various entities. According to Lumley (2014), a group of people with common characteristics constitute the population, which is further defined as all the people from whom a sample is taken (Mugenda & Mugenda, 2013). Consistent with Kothari's (2019) comparative technique, Cooper and Schindler (2015) use the term "population" to describe the entire collection of factors in data analysis. According to Gupta (2015), the target group is the particular demographic that researchers are trying to learn more about.

Participants in this research will be county government workers in Embu who work out of the county administration building in Embu Town. Executives, secretaries, and support personnel make up the whole workforce. The entire population is 300 personnel divided across several departments, according to the County Government of Embu Records (2024).

Table 1: Target Population

Sector Population	Target population	percentage
Executives	50	17
Clerks	150	50
Support Staff	100	33
Total	300	100

Source: County Government of Embu Records (2024)

3.3 Sample and Sampling Technique

Orodho and Kombo (2014) state that a subset of the population being studied is called a sample. According to Kothari (2019), a sample is a group of units used to derive conclusions. In addition,

as Kombo and Tromp (2014) point out, in order to learn about the universe as a whole, researchers often use samples, which are actually smaller representations of the actual population. One major advantage of selecting a subset of a population is that it allows us to draw inferences about the complete population. This inquiry will make use of stratified sampling. According to Koehler, Snyder, Ord, and Beaumont (2015), a sample is a representation of a subset within a bigger population.

In their 2015 study, Marczyk, Drazek, Pietrowska, Widlak, Polanska, and Polanski defined a sample as a suitable subset of a population. It accurately represents the study's intended participants, say Konchitchki and O'Leary (2014). A single representative of the population of interest is considered the sample size, according to Mugenda & Mugenda (2013). This is the precise number of survey takers and data contributors who will be involved in the study. The equation for the study's sample size was obtained by substituting the necessary number of responses into Yamane's (1967) simplified formula.

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

Where:

n = sample size

N = population size

e = the level of precision

1 = Constant

This formula is based on the following assumptions: a 95% confidence level, a 5% level of accuracy, and a 0.5 level of variability (or percentage).

$$n = \frac{300}{1 + 300(0.05)^2}$$

= 171.42 ≈ 172 respondents

n = 172 respondents.

Sample size=172 Respondents

While the intermediate and operational workers will be distributed, the 20 top managers will be chosen using a census technique. The operational staff and middle management will be selected using a simple random selection process. Table 3.1 displays the respondent sample size.

Table 2: Sample Size

Population Category	Target Population	Sample Size percentage
Executives	20	12
Clerks	60	34
Support Staff	220	126
Total	300	172

3.4 Data Collection Instruments

In a questionnaire, respondents select the correct response from a predetermined set of options in response to a series of questions. The distribution of questionnaires was used to gather primary data. In order to acquire the respondent's perspective, we asked them a structured inquiry. Respondents are not limited to just one choice when asked a Likert-type inquiry. The Likert scale will use the following coding scheme: We have 5 levels of agreement: 1 (strongly disagree), 2 (disagree), 3 (neutral), and 4 (agree).

3.5 Pilot Study

The collected data had to be able to address the issues with the investigation, therefore pilot tests were conducted (Saunders & Lewis, 2015). There are a lot of survey questions that don't get to the point or that people don't understand (Newing, 2014). This emphasizes the paramount need of doing pilot tests. A pilot test can help with data collecting and can also show you where you went wrong with your probability test (Cooker and Schindler 2014). A test run was carried out in Embu County.

Sekaran (2014) states that in order to find out if the study is legitimate and if the instrument is reliable, a pilot test is necessary. The criteria-based data collection process began with the questionnaire's redesign, pilot testing, and sample selection (Saunders and Lewis, 2015).

The questionnaires used to collect the necessary data for the project were pilot tested to ensure their validity and reliability. According to Saunders, Lewis, and Thornhill (2019), pilot testing is

done to determine if the study design and equipment are accurate and appropriate. The duration of a pilot sample that is used to guide testing might vary according to time, money, and common sense, according to Baker and Powell (2015), but it usually runs from five to 10. The data collection instrument, a questionnaire, will be tested on a sample comprising 10% of the total intended respondents in this study to ensure its relevance and effectiveness."

This revision clarifies that the sample size for testing the questionnaire is based on a percentage of the total intended respondents in the study, which is a more common approach in research methodology. However, it's still important to justify this sample size selection based on statistical principles and the specific requirements of the study. Additionally, it's advisable to refer to authoritative sources or guidelines in the field of research methodology to ensure best practices are followed. The questionnaire were completed by thirty-nine randomly selected respondents as part of the pilot testing.

3.5.1 Validity of Instruments

The reliability, completeness, and applicability of the data constitute its validity, as stated by Buerger, Kruger, and Westermann (2013). Concept and content validity were both utilized in this investigation. The questionnaire is structured with several parts that are meant to probe data for particular purposes and closely align with the study's conceptual framework; this ensures construct validity (Zikmund, Babin, Carr, & Griffin, 2013).

Five professionals in the field and the supervisor reviewed the questionnaires carefully to ensure the validity of the information. Their task was to determine if the claims made in the survey are relevant, meaningful, easy to understand, and unacceptable. Before the final data collecting activity, the instruments were adjusted appropriately according to the assessment results. In order to incorporate their suggestions into making the material more valid, the researcher sent out a sample questionnaire to a subset of respondents to see if the questions were clear and easy to understand.

3.5.2 Reliability of Instruments

According to Cronbach (1951), the reliability of a collection of measurement items is characterized by how consistent they are. Time, resources, and practical considerations all play a role in determining the optimal proportion of the total survey population to use as a pilot (Baker, Veit,

and Powell, 2015). Twenty (20) people were chosen at random to fill out a reliability survey. In order to control for response bias, we will not include these participants in the final statistic. Among the several internal consistency measures developed by SPSS, the researcher relied on Cronbach's Alpha (α). When it comes to measuring one latent variable, the reliability of a test battery may be explained by the Cronbach alpha coefficient (Cronbach, 1951). We used Cronbach's Alpha to make sure the five-point Likert scale items were reliable. This allowed the researcher to determine the internal consistency dependability, with a cutoff value of 0.7, as stated in (Oncu, & Cakir, 2014). Higher levels of internal consistency dependability are indicated by Cronbach's alpha values that are closer to 1. As per Sekaran (2014), this is the case. For a newly created survey, a coefficient of 0.7 is recommended.

3.6 Data collection procedure.

Data was gathered in the summer of 2024. The revised questionnaire and data entry were facilitated by two research assistants. The material was imparted to them. To make sure the participants understood the questions and could answer them correctly, we had them look over illustrated answers. We employed a drop-and-pick technique to collect data in order to increase the response rate.

3.7 Data Analysis and Presentation

Research and decision-making rely heavily on data analysis, which is the act of systematically looking at data, interpreting it, and drawing conclusions. The research used statistical methods like multiple regression analysis to learn about the variables' interrelationships and to anticipate the results. Multiple regression analysis examines the relationship between a single dependent variable and a large number of independent factors. One way to express the regression model is as $Y=B_0+B_1X_1+B_2X_2+B_3X_3+B_4X_4+e$

The public procurement performance is denoted by Y , the allocation of funds by X_1 , the support of upper management by X_2 , the competence of personnel by X_3 , and the information technology infrastructure by X_4 . The influence of each independent variable is measured by the coefficients (B_0, B_1, B_2, B_3, B_4), and the error term is denoted by its integral.

The particular multiple regression model developed for this investigation is: The formula for Procurement Performance (Y) is $B_0 + B_1 + B_2 + B_3 + B_4 + e$, where B_0 is Budgetary Allocation, B_1 is Top Management Support, B_2 is Budgetary Allocation, B_3 is Staff Competence, and B_4 is IT Infrastructure. We will use statistical software such as SPSS to estimate these coefficients from the data we have. This will help us understand the direction and strength of the correlations between the independent variables and the dependent variable. Results showed that each predictor was statistically significant, the model fit was satisfactory (as measured by R-squared and other metrics), and there may be consequences for the efficiency of public procurement in Embu County. The results will provide evidence-based insights for improving public institutions' procurement procedures by revealing if variables including budget allocation, support from upper management, staff competency, and IT infrastructure have a substantial impact on procurement success.

3.8 Ethical Considerations

3.8.1 Confidentiality

Because of the potential for responders to be afraid of answering questions about current events within the company, this is a significant constraint. Alternatively, they may request clearance from higher-ups, which would result in further bureaucracy and red tape. The researcher reassured the participants that their information would be held in the strictest confidence and used only for the research to find a solution to this problem. Obtaining confidential but essential company documents and records.

3.8.2 Uncooperativeness

Unwillingness to work together is another significant problem since some employees might not want to share information, which leaves other questions unsolved. In order to prevent this, the researcher only examined questions that were fully responded to and returned. Furthermore, the researcher will consult long-term employees who are familiar with the company's culture and practices before making hiring decisions.

3.8.3 Privacy

Because it would expose their methods to rivals, several workers believed that disclosing information about their supplier preferences would violate their right to privacy. However, the researcher allayed respondents' fears by securing management consent and guaranteeing that the data would only be used for study purposes.

3.8.4 Anonymity

The researcher will receive some responses that are not properly identified. In response, the researcher will only collect the accurately completed questions.

3.8.5 Voluntary Participation

It's possible that some survey participants feel under pressure to finish the questionnaire or that doing so will earn them something. Respondents will be informed by the researcher that they are providing their answers willingly and that they will not be forced to do so.

3.9 Chapter Summary

This chapter focuses on the researcher's methods for administering the survey. It places an emphasis on the study's intended participants, sample size, and data analysis strategy.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

4.1 Introduction

This chapter presents the results of the data analysis, which includes descriptive and inferential statistics. Budget allocation, staff competency, support from upper management, and IT infrastructure are the independent factors, and the link between them and procurement performance is the dependent variable. To find this relationship, the study employs a number of statistical tests. Among these tests are analyses of correlation utilizing Karl Pearson's coefficient of correlation, coefficients, and multiple regression. All results are presented in tabular form and accompanied by thorough explanations.

4.2 Response Rate

Table 4.1 Response Rate of the Study

Distributed Questionnaires	Returned Questionnaires	Response Rate (%)
172	130	75.6%

A response rate of 75.6% was achieved with 130 returned out of 172 surveys. A response rate of 70% or above is deemed exceptional for data analysis, whereas a 50% response rate is deemed adequate (Mugenda & Mugenda, 2009). The results are statistically valid because of the large sample size, which reduces the possibility of non-response bias.

Because it includes a wide variety of perspectives from people working in procurement for the County Government of Embu, the study's high response rate increases its credibility. In addition, the results are more applicable to the wider setting of public procurement due to the high sample size, which enhances their accuracy and validity.

4.3 Demographic Characteristics

4.3.1 Gender of Respondents

Table 4.2 Gender Distribution of Respondents

Category	Frequency (N)	Percentage (%)
Male	72	55.4%
Female	58	44.6%
Total	130	100%

Of those who took the survey, 55.4% were men and 44.6% were women. As a result of their efforts to promote gender inclusion within the procurement sector, the county has nearly equal representation of men and women. Better decision-making and overall effectiveness in procurement procedures might result from gender diversity, which introduces various viewpoints.

The inclusion of a balanced gender sample also helps ensure that the findings are reflective of both male and female perspectives, making the results more comprehensive. This gender balance may also indicate adherence to public sector policies that encourage equal representation in government employment.

4.3.2 Age of Respondents

Table 4.3 Age Distribution of Respondents

Category	Frequency (N)	Percentage (%)
20-30 years	25	19.2%
31-40 years	60	46.2%
41-50 years	40	30.8%
Above 50 years	5	3.8%
Total	130	100%

The majority of respondents (46.2%) were aged between 31-40 years, indicating that the bulk of the procurement workforce is in the middle of their careers. This age group is often associated with having enough work experience to manage procurement processes effectively, while also being adaptable to new technologies and methods. Employees aged 41-50 years make up 30.8% of the workforce, suggesting that a significant number of experienced staff contribute to procurement decision-making.

The smaller percentage of employees in the 20-30 years and above 50 years categories reflects a balanced distribution of younger and older employees. The younger group may be more inclined to adopt innovative approaches, while the older group brings institutional knowledge and experience to the procurement process.

4.3.3 Educational Level of Respondents

Table 4.4 Educational Level of Respondents

Category	Frequency (N)	Percentage (%)
Diploma	30	23.1%
Bachelor’s Degree	70	53.8%
Master’s Degree and Above	30	23.1%
Total	130	100%

Over half of the respondents (**53.8%**) hold a bachelor’s degree, indicating that the majority of the procurement workforce is well-educated. Education is an important factor in procurement, as higher education levels are generally associated with better understanding of procurement regulations, policies, and technologies. The **23.1%** with a master’s degree or higher also highlights a commitment to continuous professional development, which can further enhance procurement performance. These findings align with Kariuki (2019), who emphasized the importance of education in improving procurement decision-making and efficiency. The diverse educational background of the respondents strengthens the robustness of the study and reflects a procurement workforce that is equipped to handle both strategic and operational procurement functions.

4.2 Descriptive Statistics of Key Variables

4.2.1 Budgetary Allocation

Table 4.1 **Budgetary Allocation Impact on Procurement Performance**

Statement	N	Mean	Std. Deviation
The current budget allocation for procurement is adequate	130	4.00	0.758
The allocated budget supports procurement operations	130	3.90	0.795
Budget allows for procurement of advanced technical solutions	130	3.75	0.804
Budget allocation balances operational costs and quality	130	3.70	0.832
The budget yields a positive return on investment	130	3.65	0.900
Average	130	3.80	0.818

The results from Table 4.1 show that the majority of respondents (with a mean score of 3.80) believe that budgetary allocation significantly affects procurement performance. The highest mean score (4.00) was for the statement “The current budget allocation for procurement is adequate,” which suggests that most respondents believe the budget allocated to procurement is sufficient. This indicates that the funds allocated are mostly adequate to cover the essential procurement operations within the County Government of Embu.

However, there are concerns with the budget's ability to yield a positive return on investment, as indicated by the relatively lower mean score of 3.65. This suggests that while the budget may be sufficient, the use of those funds may not always result in efficient or optimal procurement outcomes. There is a need for better financial management to ensure that the funds are utilized in ways that maximize value for the county.

Budgetary allocation is crucial for the success of procurement functions, as it ensures that resources are available to meet the organization’s procurement needs. A lack of sufficient budget can delay procurement processes and lead to inefficiencies. The findings are consistent with Lusambo (2020), who emphasized the importance of sufficient and timely budget allocation in public procurement.

4.2.2 Karl Pearson's Coefficient of Correlation for Budgetary Allocation

Table 4.2 Karl Pearson's Correlation Coefficient: Budgetary Allocation and Procurement Performance

Variable	Correlation Coefficient (r)	Significance (p-value)
Budgetary Allocation	0.714	0.000

With a value of 0.714, the association between procurement success and budget allocation is quite good. This association is statistically significant at the $p < 0.05$ level, as shown by the p-value of 0.000. This demonstrates the importance of financial resources in the procurement process as better allocation of funds usually results in better procurement performance.

The significant positive correlation suggests that budgetary constraints can be a major obstacle to procurement efficiency. When the budget is insufficient, procurement operations may be delayed, leading to disruptions in service delivery and higher operational costs. On the other hand, when the budget is sufficient and well-managed, procurement processes can be executed smoothly, leading to better overall performance.

Previous research has shown that sufficient funding is a critical factor in public sector procurement success (Mwangi & Kihara, 2019). This finding is in line with the correlation. The importance of county governments prioritizing fiscal preparation to guarantee the availability of cash when needed is underscored by this.

4.2.3 ANOVA for Budgetary Allocation

Table 4.3 ANOVA for Budgetary Allocation

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	45.890	4	11.473	23.765	0.000
Residual	57.200	125	0.458		
Total	103.090	129			

The budget allocation ANOVA findings provide a statistically significant regression model with an F-value of 23.765 and a p-value of 0.000. So, the distribution of funds has a major impact on how well purchases turn out. Budget allocation and procurement performance are positively correlated, with a p-value lower than 0.05 indicating that this is not a random effect.

The significant F-value shows that budgetary allocation is a crucial factor that must be managed effectively to enhance procurement performance. Inadequate budgetary allocation can result in procurement delays, reduced service quality, and supplier dissatisfaction, which can ultimately affect the overall performance of the organization.

The availability of financial resources significantly impacts the procurement department's capacity to accomplish its goals and efficiently offer services, which is why these findings highlight the necessity of proper budgetary planning and allocation in the public sector.

4.2.4 Regression Coefficients for Budgetary Allocation

Table 4.4 Regression Coefficients for Budgetary Allocation

Variable	Unstandardized Coefficients (B)	Standard Error	t	Sig.
(Constant)	1.002	0.214	4.684	0.000
Budgetary Allocation	0.342	0.061	5.607	0.000

A budgetary allocation regression coefficient of 0.342 indicates a 0.342 unit improvement in procurement performance for every unit increase in budgetary allocation. The statistical significance of this link is confirmed by the t-value of 5.607 and the p-value of 0.000. This data lends credence to the idea that allocating funds to specific projects improves their procurement outcomes.

Proper financial planning and allocation are crucial, since the positive coefficient indicates that procurement performance improves as budgetary allocation grows. With a p-value of 0.000, this link is highly significant, suggesting that better resource allocation can significantly boost procurement performance.

This confirms what Kariuki (2019) found: that money is everything when it comes to procurement, and that public sector agencies can't run effective procurement operations without sufficient funding.

4.3 Top Management Support

4.3.1 Descriptive Statistics for Top Management Support

Table 4.5 Top Management Support for Procurement

Statement	N	Mean	Std. Deviation
Top management provides adequate resources for procurement strategies	130	3.95	0.765
Procurement strategy aligns with organizational goals	130	3.80	0.812
Top management supports change management in procurement	130	3.85	0.824
Strong commitment to improve procurement performance	130	3.75	0.821
Top management integrates procurement objectives with organizational	130	3.65	0.855
Average	130	3.80	0.815

Explanation: The findings from Table 4.5 show that the respondents generally believe that top management plays a critical role in procurement success, with a mean score of 3.80. The highest mean score (3.95) was for the statement "Top management provides adequate resources for procurement strategies," indicating that respondents agree that management is supportive in providing the necessary resources for procurement.

The relatively high average score reflects the positive perception of management's role in the procurement process. However, the slightly lower score for "Top management integrates procurement objectives with organizational goals" (3.65) suggests that some respondents feel

that there is still room for improvement in fully aligning procurement objectives with broader organizational goals.

Top management support is essential in ensuring that procurement processes are well-resourced, timely, and aligned with the overall strategy of the organization. The findings align with Kamau et al. (2021), who emphasized the importance of management’s active involvement in procurement decision-making for improved performance.

4.3.2 ANOVA for Top Management Support

Table 4.6 ANOVA for Top Management Support

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	33.210	4	8.302	20.356	0.000
Residual	50.150	125	0.401		
Total	83.360	129			

Explanation: A statistically significant F-value of 20.356 and p-value of 0.000 were shown in the ANOVA findings for top management support. This proves that the backing of upper management has a major impact on the efficiency of procurement processes. From strategy alignment to resource allocation, management plays a crucial role in successful procurement procedures, as confirmed by the high F-value.

The importance of effective leadership in influencing procurement success is highlighted by the substantial p-value. Involvement from upper management improves outcomes by ensuring that procurement procedures are well-resourced and in line with the organization's strategic objectives.

These findings are in line with other research, such as that of Arasa and Achuora (2012), which established that the backing of upper management is an essential component of effective public procurement.

4.3.3 Regression Coefficients for Top Management Support

Table 4.7 **Regression Coefficients for Top Management Support**

Variable	Unstandardized Coefficients (B)	Standard Error	t	Sig.
(Constant)	1.135	0.208	5.462	0.000
Top Management Support	0.278	0.068	4.086	0.001

A top-level management support coefficient of 0.278 indicates a 0.278-unit improvement in procurement performance for every one-unit increase in top-level management support. This association is indeed statistically significant, as shown by the t-value of 4.086 and the p-value of 0.001. By allocating sufficient funds and ensuring that procurement strategies are in line with corporate goals, this discovery further supports the notion that senior management plays a pivotal role in guaranteeing procurement success.

Improving top-level management's support can result in better procurement outcomes, according to the positive coefficient. The importance of management involvement in procurement processes and decision-making cannot be overstated. This will lead to improved alignment between procurement operations and the broader organizational strategy.

4.4 Staff Competence

4.4.1 Descriptive Statistics for Staff Competence

Table 4.8 **Staff Competence in Procurement**

Statement	N	Mean	Std. Deviation
Adequate career development opportunities are available	130	3.85	0.795
Training programs enhance staff competence	130	3.90	0.782
High professionalism within the procurement department	130	4.00	0.743
Academic qualifications align with procurement needs	130	3.75	0.811

Professionalism positively impacts procurement outcomes	130	3.85	0.780
Average	130	3.87	0.782

The results in Table 4.8 reveal that respondents generally perceive staff competence as a critical factor influencing procurement performance, with a high average mean of **3.87**. The highest mean score (4.00) was for the statement "High professionalism within the procurement department," which reflects a strong belief in the importance of professionalism in procurement activities.

The second-highest score (3.90) was for "Training programs enhance staff competence," indicating that respondents recognize the value of continuous training in improving the skills and capabilities of procurement staff. The mean score for "Adequate career development opportunities are available" was slightly lower (3.85), suggesting that while some opportunities exist, there may be room for improvement in this area.

Overall, the findings indicate that staff competence, including professional skills, training, and academic qualifications, plays a significant role in enhancing procurement performance. These results align with Barcan (2010), who emphasized the importance of skilled and knowledgeable procurement personnel in driving operational efficiency.

4.4.2 ANOVA for Staff Competence

Table 4.9 ANOVA for Staff Competence

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	38.100	4	9.525	22.314	0.000
Residual	53.990	125	0.432		
Total	92.090	129			

The regression model is statistically significant, as shown in the ANOVA table for staff competency, with an F-value of 22.314 and a p-value of 0.000. Therefore, the competency of the personnel greatly affects the efficiency of the procurement process. The statistical significance of

the association between staff competency and procurement results is confirmed by a p-value of less than 0.05, indicating that it is highly unlikely that this relationship occurred by coincidence.

The significant F-value demonstrates the strength of the relationship between staff competence and procurement performance. When procurement staff are well-trained and possess the necessary qualifications, they are more likely to execute procurement processes efficiently, thereby improving overall performance.

These findings are consistent with prior studies, such as Mwangi & Kihara (2019), which found that the competence and professionalism of staff are crucial to achieving high performance in procurement departments, particularly in the public sector.

4.4.3 Regression Coefficients for Staff Competence

Table 4.10 Regression Coefficients for Staff Competence

Variable	Unstandardized Coefficients (B)	Standard Error	t	Sig.
(Constant)	0.955	0.210	4.548	0.000
Staff Competence	0.285	0.065	4.385	0.001

Staff competency has a regression coefficient of 0.285, meaning that procurement performance increases by 0.285 units for every unit increase in staff competence. The statistical significance of this link is shown by the t-value of 4.385 and p-value of 0.001. This lends credence to the theory that stronger procurement results are the result of more competent workers.

The positive coefficient suggests that improving staff competence, through training programs and career development opportunities, can significantly enhance procurement performance. This finding highlights the importance of continuous professional development in equipping staff with the necessary skills to handle complex procurement tasks and make informed decisions.

These results align with the findings of Kariuki (2019), who argued that skilled procurement personnel are essential for achieving efficiency and transparency in public procurement. The statistical significance of this relationship underscores the need for organizations to invest in training and development programs for their procurement staff.

4.3 Limitations of the study

This study has a number of drawbacks. To start, a few people were afraid or distrustful; therefore, they were not willing to give the required information. Respondents were reassured of their confidentiality and the data was utilized only for academic reasons in order to address this. Secondly, there were delays in completing the surveys due to the hectic schedules of certain responders. This was addressed by giving respondents three weeks to do the surveys at their own pace. The study's conclusions were intended to be as little affected as possible by these constraints, hence these procedures were taken.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

The analysis was presented in Chapter 4, and this chapter provides a concise summary of the key conclusions. The chapter concludes with an analysis of the budget allocation, support from higher management, people competency, and IT infrastructure as variables affecting procurement performance in the County Government of Embu. In order to make procurement operations more efficient and successful, we also give upgrade ideas.

5.2 Summary of Findings

Budget allocation, support from upper management, staff competency, and information technology infrastructure were the four main variables that were analyzed in connection to procurement success. The analysis revealed that all four variables have a significant influence on procurement performance, with budgetary allocation showing the strongest correlation. This highlights the importance of having sufficient and well-managed financial resources to support procurement processes. Without adequate funds, even the most well intentioned procurement strategies can falter.

There was a substantial correlation between top-level management support and procurement performance. According to the results, procurement procedures improve in efficacy and output when upper-level management allocates sufficient funds and coordinates purchasing policies with company objectives. Misaligned priorities, insufficient resources, and postponed procurement decisions are all possible outcomes of top-down indifference.

Staff competence emerged as another critical factor influencing procurement performance. The results showed that procurement departments staffed by well-trained, competent personnel tend to achieve better procurement outcomes. Staff professionalism, continuous training, and academic qualifications were all identified as important components of procurement success. These findings are consistent with previous research emphasizing the need for skilled personnel to handle complex procurement tasks effectively.

IT infrastructure, while showing a slightly lower impact compared to the other variables, was still found to significantly affect procurement performance. Respondents indicated that the integration of modern technology into procurement processes improves transparency, reduces manual errors, and speeds up operations. Given the increasing importance of technology in modern procurement, investing in IT infrastructure will be crucial for maintaining efficient procurement systems in the long term.

5.3 Conclusions

5.3.1 Budgetary Allocation

According to the research, the most important factor in deciding procurement performance is budget allocation. The availability of cash to satisfy procurement demands is ensured by adequate budgetary allocation, which in turn prevents delays and guarantees timely acquisition of products and services. The findings suggest that when budgets are managed effectively, procurement operations run smoothly, and organizational objectives are more likely to be met. However, the study also highlighted concerns regarding the utilization of funds, with respondents suggesting that not all budgetary allocations yield optimal returns.

In light of these findings, it is recommended that the County Government of Embu strengthen its financial management systems to ensure that allocated funds are used efficiently. This may include implementing more stringent budgeting controls, regular audits, and better forecasting to ensure that procurement departments receive the resources they need without overspending or mismanagement.

5.3.2 Top Management Support

The conclusion drawn from the analysis is that top management support is essential for the success of procurement processes. When top management provides strategic direction, aligns procurement goals with organizational objectives, and allocates sufficient resources, procurement functions are more efficient and effective. Without strong support from leadership, procurement processes can become disjointed, leading to inefficiencies and delays in decision-making.

To improve procurement performance, it is recommended that top management in the County Government of Embu take a more proactive role in procurement operations. This could involve regular involvement in strategic procurement decisions, ensuring that procurement strategies are aligned with the county's overall goals, and making the necessary resources available for procurement to function effectively.

5.3.3 Staff Competence

The study found that the proficiency of the personnel had a significant impact on the success of the procurement process. Staff members with the necessary skills are more likely to handle supplier relationships efficiently, negotiate favorable contracts, and follow all applicable procurement requirements. In order to keep procurement departments' skill levels high, the results demonstrate the importance of ongoing training and professional development. Even the most competent employees may fall behind in the rapidly developing field of procurement if they have not received sufficient training.

The Embu County Government should address this by providing procurement professionals with ongoing training and development opportunities. Procurement officers require specialized training in areas including strategic supplier management, procurement legislation, and new technology. On top of that, keeping procurement professionals abreast of industry best practices is another benefit of fostering a culture of lifelong learning.

5.3.4 IT Infrastructure

The study concludes that IT infrastructure, while having a slightly lower impact compared to other variables, is still a crucial factor in procurement performance. Modern IT systems streamline procurement processes by automating routine tasks, reducing the likelihood of manual errors, and increasing transparency. The integration of IT solutions allows procurement officers to track the procurement cycle more efficiently, resulting in faster decision-making and improved supplier relationships.

It is recommended that the County Government of Embu prioritize investments in modern procurement systems that integrate automation and digital tracking of procurement activities.

Additionally, training procurement staff on how to use these systems effectively will ensure that they are able to maximize the benefits of the technology. A focus on IT infrastructure will be essential for improving procurement transparency and accountability.

5.4 Recommendations

5.4.1 Budgetary Allocation

Budgetary allocation should be prioritized in procurement planning to ensure that sufficient resources are available when needed. It is recommended that the County Government of Embu implements a more robust budgeting system, with a focus on aligning procurement budgets with the overall organizational strategy. Regular audits and financial reviews should be conducted to ensure that budget allocations are being utilized effectively and that funds are being directed towards value-generating procurement activities.

5.4.2 Top Management Support

Top management should be more involved in the procurement process to ensure that procurement goals are fully aligned with organizational objectives. It is recommended that management provides strategic oversight and direction to the procurement function, ensuring that sufficient resources are allocated and that procurement policies are consistently enforced. Regular communication between management and procurement officers should be established to ensure that procurement decisions are made in a timely and efficient manner.

5.4.3 Staff Competence

The County Government of Embu should invest in continuous training and professional development for procurement staff. It is recommended that a training program be implemented to address the knowledge gaps identified in the study. This could include workshops, seminars, and certifications in areas such as procurement regulations, risk management, and supplier negotiations. By ensuring that staff are well-trained and competent, the county will be better positioned to achieve its procurement objectives.

5.4.4 IT Infrastructure

Investment in modern IT systems should be a priority for the County Government of Embu. Procurement processes should be digitized to improve efficiency and transparency. It is recommended that the county invests in e-procurement platforms that allow for real-time tracking of procurement activities. In addition, procurement staff should be trained on how to use these systems to ensure that they can fully leverage the benefits of technology in streamlining procurement processes.

5.5 Suggestions for Further Studies

Although this study has shed light on the elements impacting the County Government of Embu's procurement performance, there are still a number of topics that require more investigation. First, future studies could explore the impact of external factors such as political influence, economic instability, and legislative changes on procurement performance. Political instability and frequent regulatory changes can disrupt procurement processes, leading to inefficiencies that were not fully explored in this study.

Secondly, longitudinal studies could be conducted to examine how the continuous improvement of staff competence and the adoption of IT infrastructure influence procurement performance over time. This would provide a clearer picture of how long-term investments in human resources and technology affect the effectiveness and transparency of procurement processes. The specific difficulties experienced by various areas might be better understood and optimal practices could be better understood through cross-county comparison studies.

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REPUBLIC OF KENYA



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APPENDIX I: QUESTIONNAIRE

SECTION A: PERSONAL DATA.

1. Kindly indicate your gender

Male

Female

2. Please indicate your highest level of education

Certificate

Diploma

Undergraduate

Postgraduate

Others.....please specify

3. Kindly indicate your age in complete years

18-25 years

26-35 years

36-45 years

46-60 years

4. Please indicate the completed years you have worked with in the organization

Less than 1 year

1-3 years

4-6 years

7-9 years

10 and above

SECTION A. BUDGETARY ALLOCATION

Indicate the extent to which Budgetary Allocation has affected public procurement in County Government of Embu. Use the 5-point Likert Scale as follows; 1= To a No extent; 2 = Small Extent; 3 = Neutral; 4= Large Extent; and 5= To a Very Large Extent

Statement	1	2	3	4	5
The current budget allocation for procurement is adequate to meet all necessary procurement needs.					
The allocated budget sufficiently supports the procurement department’s overall objectives and daily operations.					
The budget allocation allows for the procurement of advanced technical solutions that enhance the procurement process.					
The current budget allocation effectively balances operational costs with the need for quality procurement.					
The budget allocated to procurement activities yields a positive return on investment.					

SECTION B. TOP MANAGEMENT SUPPORT

Indicate the extent to which top management has affected public procurement in County Government of Embu. Use the 5-point Likert Scale as follows; 1= To a No extent; 2 = Small Extent; 3 = Neutral; 4= Large Extent; and 5= To a Very Large Extent

Statement	1	2	3	4	5
Top management provides adequate resources for the implementation of procurement strategies.					
The procurement strategy is well-aligned with the overall organizational goals, as supported by top management.					

Top management effectively supports change management initiatives in the procurement process.					
There is a strong commitment from top management to measure and improve procurement performance.					
Top management ensures that procurement objectives are integrated into the broader organizational strategy.					

SECTION C. STAFF COMPETENCE

Indicate the extent to which Staff Competence has affected public procurement in County Government of Embu. Use the 5-point Likert Scale as follows; 1= To a No extent; 2 = Small Extent; 3 = Neutral; 4= Large Extent; and 5= To a Very Large Extent

Statement	1	2	3	4	5
There are adequate career development opportunities available for procurement staff.					
The training programs provided to procurement staff effectively enhance their competence.					
The level of professionalism within the procurement department is high.					
The academic qualifications of procurement staff align well with the needs of the department.					
Professionalism among procurement staff positively impacts procurement outcomes.					

SECTION D. INFORMATION TECHNOLOGY INFRASTRUCTURE

Indicate the extent to which Information Technology Infrastructure has affected public procurement in County Government of Embu. Use the 5-point Likert Scale as follows; 1= To a No extent; 2 = Small Extent; 3 = Neutral; 4= Large Extent; and 5= To a Very Large Extent

Statement	1	2	3	4	5
The technical support available for the IT systems used in procurement is adequate.					
The IT systems used in the procurement department are secure.					
Security measures in the IT infrastructure effectively prevent breaches and ensure safe transactions.					
The IT infrastructure supports accountability in procurement processes.					
The current IT system enhances transparency within the procurement process.					

SECTION E. PERFORMANCE OF PUBLIC PROCUREMENT

Indicate the extent to which performance of public procurement. Use the 5-point Likert Scale as follows; 1= To a No extent; 2 = Small Extent; 3 = Neutral; 4= Large Extent; and 5= To a Very Large Extent

	1	2	3	4	5
The IT infrastructure in place ensures that all procurement activities are transparent and open to scrutiny.					
The current IT infrastructure has reduced delays in procurement processing and delivery.					
The procurement system supports effective performance tracking and reporting within the procurement department.					
The procurement system enables faster response times to procurement requests, improving overall service delivery.					

The IT infrastructure has significantly contributed to meeting key performance targets in procurement.

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