

**FACTORS AFFECTING PROCUREMENT ACTIVITIES IN PUBLIC
ORGANISATIONS IN KENYA: A CASE STUDY OF MACHAKOS WATER AND
SEWERAGE COMPANY.**

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DECLARATION

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

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DEDICATION

This project is lovingly dedicated to my father, Raymond Mutinda, whose wisdom and guidance continue to inspire me, my mother, Josephine Mutinda, whose prayers, sacrifices, and unconditional love have been the foundation of my success, and my sister, Joan Mutinda, for her constant encouragement, companionship, and belief in me. Their unwavering support and inspiration have been my greatest source of strength throughout this journey.

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ABSTRACT

The study sought to examine the factors affecting procurement activities in public organizations in Kenya, with a specific focus on Machakos Water and Sewerage Company. The research was guided by four specific objectives: to examine the effect of procurement staff competency on procurement activities, to assess the influence of the procurement regulatory framework, to investigate the impact of technology adoption, and to evaluate how financial resource allocation affects procurement activities. A descriptive research design was employed, targeting 70 staff members directly involved in procurement, including procurement officers, finance officers, departmental heads, and senior management. Data was collected using structured questionnaires, and analysis was conducted using descriptive statistics and regression techniques. The findings revealed that procurement staff competency, particularly in terms of qualifications, training, and experience, had a significant positive effect on procurement efficiency and reduction of delays. The procurement regulatory framework was found to enhance transparency and accountability, although minor compliance gaps were noted. Technology adoption improved accuracy, record-keeping, and timeliness of procurement processes, though full automation was still limited due to infrastructural challenges. Financial resource allocation was identified as a critical factor, with adequate budgeting and timely disbursement significantly influencing successful contract execution and minimizing delays. The study concludes that strengthening staff competency, ensuring strict compliance with procurement regulations, investing in digital procurement systems, and improving financial resource allocation are essential to enhancing procurement activities. The study recommends continuous professional training, adoption of full e-procurement systems, timely budget disbursement, and improved monitoring mechanisms to ensure efficiency, transparency, and accountability in procurement.

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	viii
LIST OF FIGURES	ix
ACRONYMS AND ABBREVIATIO	x
OPERATIONAL DEFINITION OF TERMS	xi
CHAPTER ONE	1
INTRODUCTION	1
1.0 Introduction.....	1
1.1 Background of the Study	1
1.2 Statement of the Problem	4
1.3 Objectives	5
1.4 Research Questions	5
1.5 Justification of the Study	5
1.6 Scope	6
1.7 Chapter Summary.....	6
CHAPTER TWO	7
LITERATURE REVIEW	7
2.0 Introduction.....	7
2.3 Summary and Research Gaps	35
2.4 Conceptual Framework	39
2.5. Operationalization of Variables.....	40
2.6 Chapter Summary.....	41
CHAPTER THREE	42
RESEARCH DESIGN AND METHODOLOGY	42
3.0 Introduction.....	42
3.1 Research Design.....	42
3.2 Target Population	42
3.3 Sample and Sampling Technique	43

3.5 Pilot Study	44
3.6 Data Collection Procedure.....	45
3.7 Data Analysis and Presentation.....	45
3.8 Ethical Considerations.....	45
3.9 Chapter Summary.....	46
CHAPTER FOUR	47
RESEARCH FINDINGS AND DISCUSSION	47
4.0 Introduction.....	47
4.1 Presentation of Research Findings	47
CHAPTER FIVE	62
SUMMARY, RECOMMENDATIONS AND CONCLUSIONS.....	62
5.0 Introduction.....	62
5.1 Summary of Findings	62
5.2 Conclusion	65
5.3 Recommendations	66
References	69
APPENDICES	73
APPENDIX I: LETTER OF INTRODUCTION.....	73
APPENDIX II: QUESTIONNAIRE	74

LIST OF TABLES

Table 1: Summary and Research Gaps	35
Table 2: Operationalization of Variables	40
Table 3: Target Population.....	43
Table 4: Gender of Respondents	48
Table 5: Age of Respondents	49
Table 6: Position in the Organization.....	50
Table 7: Work Experience	52
Table 8: Procurement Staff Competency.....	53
Table 9: Procurement Regulatory Framework.....	55
Table 10: Technology Adoption.....	56
Table 11: Financial Resource Allocation.....	58
Table 12: Correlation analysis	59
Table 13: Regression Coefficients	61

LIST OF FIGURES.

Figure 1 Conceptual Framework 39
Figure 2: Response Rate 47
Figure 3: Gender..... 49

ACRONYMS AND ABBREVIATIO

CIPS:	Chartered Institute of Procurement and Supply
ICT:	Information and Communication Technology
MWSC:	Machakos Water and Sewerage Company
MUA:	Management university of Africa
OECD:	Organisation for Economic Co-operation and Development
PPRA:	Public Procurement Regulatory Authority
SD:	Standard Deviation
SPSS:	Statistical Package for the Social Sciences
UN:	United Nations
WB:	World Bank

OPERATIONAL DEFINITION OF TERMS

Academic Qualifications: Refers to the formal educational background and certifications held by procurement staff, which determine their knowledge base and ability to perform procurement tasks effectively.

Budget Allocation: The distribution of financial resources by management to the procurement department to facilitate the execution of procurement activities and contract implementation.

Financial Resource Allocation: The process of planning, disbursing, and utilizing funds for procurement operations to ensure timely delivery of goods, works, and services.

Procurement Activities: The series of processes undertaken in acquiring goods, services, and works, including requisition, tendering, evaluation, contracting, and supplier management.

Procurement Regulatory Framework: The set of laws, policies, and guidelines governing public procurement processes in Kenya, aimed at ensuring transparency, fairness, and accountability.

Technology Adoption: The extent to which Machakos Water and Sewerage Company has integrated digital tools, systems, and platforms into procurement processes to enhance efficiency and transparency.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter introduces the study on the factors affecting procurement activities in public organizations in Kenya, using Machakos Water and Sewerage Company as a case study. It outlines the background of the study, the problem statement, research objectives, research questions, justification, scope, and a summary of the chapter. The aim is to contextualize the research problem and provide a foundation for the subsequent chapters.

1.1 Background of the Study

The function of procurement is crucial in public organizations because it has a direct influence on public trust, financial performance, and service delivery. Public procurement accounts for 12% to 20% of a nation's GDP on average, making it a substantial percentage of government spending worldwide (OECD, 2021). Procurement procedures that work promote economic expansion, more openness, and effective public service provision. To increase accountability, decrease corruption, and streamline the procurement process, wealthy nations have implemented sophisticated procurement rules and digital technologies. E-procurement systems, for example, have greatly enhanced procurement performance through automation and openness in nations including South Korea, Estonia, and the United Kingdom (Zhou et al., 2022; Kim & Kim, 2021).

On the other hand, developing nations—like Kenya—face a number of procurement-related difficulties, such as poor planning, a lack of funding, insufficient capacity among procurement staff, a lack of regulatory compliance, and a limited uptake of contemporary technologies (Mutinda & Otieno, 2023). The efficacy, efficiency, and openness of public organizations' procurement procedures are jeopardized by these issues. Due to capacity limitations and inadequate supervision procedures, Kenyan public institutions continue to have poor levels of compliance with procurement

regulations, according to the Public Procurement Regulatory Authority (PPRA, 2022). According to research, reducing inefficiencies requires strengthening procurement staff capabilities, putting strong regulatory frameworks in place, and applying the right technology (Nyakang'o & Mburu, 2021; Mwangi et al., 2023).

1.1.1 Procurement staff competency

Globally, the efficiency of procurement activities is significantly influenced by the competency of procurement staff. A study by Kioko and Were (2023) highlights that inadequate training and lack of professional skills among procurement personnel are major barriers to effective procurement processes. In the African context, challenges such as limited capacity-building initiatives and insufficient professional development opportunities hinder procurement efficiency (Strategic Journals, 2023). In Kenya, enhancing the skills and knowledge of procurement staff has been shown to improve compliance with procurement regulations and streamline procurement processes (Obura, 2024).

1.1.2 Procurement regulatory framework

A robust procurement regulatory framework is essential for ensuring compliance and integrity in procurement processes. Globally, well-structured legal frameworks contribute to transparency and accountability in public procurement (Mwanarafa & Osoro, 2023). In Africa, the implementation of procurement reforms has faced challenges due to weak enforcement mechanisms and lack of adherence to established regulations (Strategic Journals, 2023). In Kenya, despite the existence of comprehensive procurement laws, compliance remains a challenge, often due to inadequate enforcement and oversight (Kanyaru, 2023).

1.1.3 Technology adoption

The adoption of technology in procurement processes has been recognized globally as a means to enhance efficiency and transparency. E-procurement systems facilitate streamlined processes and reduce opportunities for corruption (Mandala et al., 2024). In Africa, the integration of digital tools in procurement is gradually improving,

though challenges such as infrastructure deficits persist (ResearchGate, 2023). In Kenya, the implementation of electronic procurement systems has significantly improved transparency and accountability in public procurement, although further investments in technology infrastructure are necessary (Ombajo et al., 2024).

1.1.4 Financial Resource Allocation

Adequate financial resource allocation is critical for the timely and successful execution of procurement activities. Globally, insufficient funding often leads to delays and compromises in procurement quality (Udoba & Mwalukasa, 2023). In the African context, budgetary constraints and misallocation of funds are common issues affecting procurement efficiency (Strategic Journals, 2023). In Kenya, studies have indicated that proper financial planning and allocation are essential for meeting procurement timelines and achieving desired outcomes (Obura, 2024)

1.1.5 Machakos Water and Sewerage Company

Machakos Water and Sewerage Company (MAWASCO), a public organization mandated to provide water and sanitation services in Machakos County, is no exception. As a critical utility service provider, MAWASCO relies heavily on effective procurement processes to ensure the timely acquisition of materials, equipment, and services. However, like many other public organizations in Kenya, MAWASCO has experienced procurement inefficiencies attributed to inadequate staff training, low adoption of procurement technologies, limited financial resources, and regulatory compliance challenges. Studies by Kamau and Muthoni (2022) emphasize that utility providers in Kenya often suffer from delayed procurements and inconsistent supplier management due to weak internal procurement systems. Given its essential role in public health and urban development, improving procurement activities at MAWASCO is imperative to enhance service delivery and achieve sustainable development.

1.2 Statement of the Problem

Despite the growing emphasis on procurement reforms and regulatory frameworks in Kenya, public organizations such as Machakos Water and Sewerage Company (MAWASCO) continue to face persistent procurement inefficiencies. Globally, procurement accounts for a substantial portion of national expenditure—between 12% and 20% of GDP—requiring systems that are efficient, transparent, and accountable (OECD, 2021). In developed countries, advancements in e-procurement and robust regulatory systems have significantly improved procurement performance (Zhou et al., 2022; Kim & Kim, 2021). However, in Kenya, public institutions are still constrained by systemic issues such as unskilled procurement personnel, inadequate enforcement of procurement laws, weak technology adoption, and insufficient financial resource allocation (Mutinda & Otieno, 2023; Kanyaru, 2023; Obura, 2024).

MAWASCO exemplifies these challenges. It has been reported that poor staff competency, delays in adopting procurement technologies, and weak compliance with procurement laws have undermined the company's ability to procure goods and services on time and within budget (Kamau & Muthoni, 2022). These inefficiencies not only compromise the delivery of critical water and sanitation services but also erode public trust and impede sustainable urban development in Machakos County. Furthermore, financial limitations and poor resource allocation often result in interrupted operations and project delays (Udoba & Mwalukasa, 2023; Obura, 2024). Although existing literature acknowledges the role of staff capacity, regulatory compliance, technology, and financial planning in enhancing procurement performance, there remains a critical knowledge gap on how these factors interplay within utility service providers in Kenya. This study, therefore, seeks to systematically investigate these procurement challenges at MAWASCO to identify actionable solutions that can inform broader public sector procurement reforms.

1.3 Objectives

General Objective

To examine the factors affecting procurement activities in public organizations in Kenya, with a specific focus on Machakos Water and Sewerage Company.

1.3.1 Specific Objectives

- i. To examine the effect of procurement staff competency on procurement activities in Machakos water and sewerage company.
- ii. To assess the influence of the procurement regulatory framework on procurement activities in Machakos water and sewerage company.
- iii. To investigate the impact of technology adoption on procurement activities in Machakos water and sewerage company.
- iv. To evaluate how financial resource allocation affects procurement activities at Machakos water and sewerage company.

1.4 Research Questions

- i. . What is the effect of procurement staff competency on procurement activities at Machakos Water and Sewerage Company?
- ii. How does the procurement regulatory framework influence procurement activities at Machakos Water and Sewerage Company?
- iii. What is the impact of technology adoption on procurement activities at Machakos Water and Sewerage Company?
- iv. How does financial resource allocation affect procurement activities at Machakos Water and Sewerage Company?

1.5 Justification of the Study

This study is essential in shedding light on the critical factors influencing procurement performance in public organizations. Findings will benefit policymakers by highlighting gaps in procurement practices that need regulatory or administrative reform. Public institutions like MAWASCO will benefit from practical

recommendations to improve procurement processes, reduce inefficiencies, and enhance service delivery. Procurement professionals and academicians will gain from the study's insights, adding to the knowledge base in public procurement management. The study is also timely, given the increasing demand for accountability, transparency, and efficiency in public resource utilization.

1.6 Scope

The study will be conducted between July and September 2025 in Machakos County, focusing specifically on Machakos Water and Sewerage Company. It will involve procurement staff, departmental heads, and senior managers responsible for procurement decisions. The scope includes examining procurement staff competency, regulatory compliance, technology adoption, and financial resource allocation as factors influencing procurement performance. The findings will reflect procurement practices within the context of Kenyan public organizations, with a specific case study approach centered on MAWASCO.

1.7 Chapter Summary

This chapter introduced the study by presenting the background, problem statement, objectives, research questions, justification, and scope. It highlighted the importance of procurement in public organizations and the challenges experienced by institutions like Machakos Water and Sewerage Company. The next chapter will present a detailed review of existing literature related to the study variables.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter delves into the theoretical and empirical underpinnings of the study while addressing key research gaps. It reviews existing theories and literature relevant to the research problem, linking them to the study objectives. The chapter includes the theoretical framework, empirical studies on the hypothesized variables, and a summary of identified research gaps. Additionally, the conceptual framework and operationalization of variables are outlined to guide the study analysis.

2.1 Theoretical Literature Review

2.1.1. Human Capital Theory

According to the Human Capital Theory, which was first put out by Schultz in 1961 and then further developed by Becker in 1993, the production and efficiency of an organization are directly impacted by the skills, knowledge, and competences of its workforce. Because they have the technical know-how to organize tenders, assess suppliers, and guarantee compliance, well-trained and competent procurement workers are crucial for effective procurement procedures (Mwaniki & Ondieki, 2021). Mutua and Karanja (2020) claim that the ongoing education and certification of procurement officials has a direct correlation with the effectiveness of procurement in Kenya's public sector. Additionally, Kihara and Muraguri (2022) argue that organizations that invest in employee development achieve better procurement outcomes through reduced lead times and improved supplier relationships. A study by Otieno and Musau (2023) further established that the professionalization of procurement staff enhances decision-making and reduces errors, thereby improving procurement efficiency in public entities.

Human Capital Theory emphasizes the importance of employee skills, competencies, and knowledge in enhancing organizational performance. The theory posits that individuals who possess more training and education are likely to be more productive in the workplace. In the public procurement sector, this theory underscores the need

for well-trained staff to improve procurement efficiency. In Kenya, numerous public organizations suffer inefficiencies due to inadequately trained procurement personnel. Staff competency includes knowledge of procurement regulations, supplier evaluation, contract management, and ethical decision-making. Studies by Mwaniki and Ondieki (2021) have shown that training programs significantly improve the efficiency of procurement staff in public institutions. Similarly, Mutua and Karanja (2020) note that certified procurement professionals tend to follow procedures more accurately and complete tasks more swiftly. Thus, investing in human capital directly improves procurement activity outcomes.

Professional development is a core pillar of Human Capital Theory in the context of procurement. It enhances technical skills that are critical for efficient operations, such as tender documentation, evaluation processes, and negotiation skills. The presence of competent staff reduces errors, shortens lead times, and improves communication with suppliers. Kihara and Muraguri (2022) report that procurement personnel who regularly undergo training are better equipped to manage supplier relationships and avoid compliance issues. Procurement tasks often involve complex documentation, and without sufficient training, public officers are prone to making costly mistakes. Otieno and Musau (2023) demonstrate that continuous education leads to better procurement practices and fewer audit queries. Moreover, training contributes to ethical awareness, which is vital in preventing procurement fraud. As such, continuous professional development is indispensable for procurement success.

Public institutions often face challenges in retaining skilled procurement officers, impacting procurement efficiency. High turnover rates lead to loss of institutional memory and disrupt established procurement routines. Human Capital Theory suggests that when organizations invest in their employees, they are more likely to retain them and achieve better performance. Mwaniki and Ondieki (2021) emphasize that competitive remuneration, promotion prospects, and career development paths enhance employee retention. Employees who feel valued tend to be more committed to organizational goals and are less likely to engage in unethical behavior. In public procurement, retaining experienced personnel improves consistency and reduces the learning curve for new staff. Mutua and Karanja (2020) argue that the public sector in

Kenya must prioritize retention strategies to sustain procurement efficiency. Therefore, human capital investment also serves as a retention strategy.

The theory also explains how knowledge transfer within teams can enhance overall procurement efficiency. When experienced officers mentor newer staff, institutional knowledge is preserved and disseminated effectively. Peer learning and on-the-job training reinforce formal training and help standardize best practices. Kihara and Muraguri (2022) show that mentorship programs in procurement departments contribute to more cohesive and knowledgeable teams. These programs help bridge the skill gap, especially in rural or under-resourced government offices. Otieno and Musau (2023) recommend structured internal training schedules and peer-review systems. Such measures ensure that procurement decisions align with national regulations and organizational goals. Over time, this institutional learning contributes to a more efficient and transparent procurement process. Thus, knowledge transfer is a crucial element of human capital development.

Another important facet of Human Capital Theory is adaptability to change, particularly in regulatory and technological contexts. Trained personnel are better able to adapt to new procurement systems, legislative amendments, or supplier management tools. Procurement officers with strong analytical and critical thinking skills are quicker to understand and implement new procedures. Mwaniki and Ondieki (2021) found that in times of reform, organizations with more skilled personnel transitioned more smoothly. Mutua and Karanja (2020) add that adaptability among staff results in fewer disruptions and continued compliance with new rules. This is particularly relevant in Kenya, where public procurement regulations are periodically reviewed. Kihara and Muraguri (2022) assert that organizations should prioritize the development of adaptable human capital. Such adaptability ensures procurement continuity during periods of institutional change.

Furthermore, Human Capital Theory ties directly to innovation within procurement departments. Skilled procurement professionals are more likely to identify inefficiencies and propose new methods for improvement. Otieno and Musau (2023) found that trained personnel often contribute to process innovations that reduce procurement costs and improve timelines. This includes adopting electronic systems,

streamlining paperwork, or negotiating better terms with suppliers. Innovation leads to competitive procurement practices and maximizes value for money. Mwaniki and Ondieki (2021) suggest that innovation is not just technological but also procedural and organizational. Mutua and Karanja (2020) emphasize that a workforce capable of thinking critically is key to continuous improvement. As such, innovation is both a product and a purpose of human capital development.

Additionally, Human Capital Theory supports the notion of decentralized decision-making in procurement. When staff are well-trained, organizations can confidently delegate procurement decisions to departmental levels. This reduces bureaucracy and speeds up procurement processes. Kihara and Muraguri (2022) highlight that decentralized procurement is more effective when staff have a solid understanding of procurement laws and procedures. Otieno and Musau (2023) argue that decentralization improves responsiveness and contextual appropriateness in procurement decisions. Mwaniki and Ondieki (2021) agree that empowered personnel are more accountable and efficient. This empowerment, however, is only feasible when staff possess the necessary skills and knowledge. Therefore, decentralization must be accompanied by adequate capacity building.

Finally, the theory offers a long-term perspective on procurement efficiency in the public sector. Investing in human capital does not yield immediate returns but results in sustainable performance improvement. Over time, a competent workforce builds a reputation for the organization, attracting better suppliers and reducing oversight costs. Mutua and Karanja (2020) argue that institutions with consistent human capital strategies outperform others in audit outcomes and procurement ratings. Kihara and Muraguri (2022) support the integration of human capital planning in public sector strategies. Otieno and Musau (2023) recommend annual training budgets and skills audits to ensure continuous development. In Kenya, long-term investment in procurement staff can resolve many inefficiencies plaguing the public procurement system. Hence, human capital is a foundational element in procurement reform and performance.

2.1.2. Institutional Theory

According to institutional theory, organizations follow normative demands and regulatory frameworks in order to be stable and acquire legitimacy (Scott, 2004). According to Maina and Gakure (2019), formal institutions frequently exert pressure on compliance, and legal and institutional frameworks have a significant impact on public procurement procedures. The Public Procurement and Asset Disposal Act (2015) and Kenya's procurement regulatory framework have greatly influenced compliance practices in public companies, claim Githui and Ochieng (2021). Further, Omondi and Wanyama (2023) argue that strict enforcement of procurement laws increases accountability and minimizes corruption. A study by Rono and Njuguna (2024) supports this by demonstrating that adherence to legal requirements and the existence of clear policies enhance transparency and process integrity.

Institutional Theory suggests that organizations adopt certain practices and structures in response to regulatory, normative, and cultural expectations. In public procurement, compliance is largely influenced by formal institutions such as government regulations and procurement authorities. Scott (2004) explains that organizations conform to rules to gain legitimacy and avoid sanctions. In Kenya, the Public Procurement and Asset Disposal Act (2015) acts as a central regulatory force that guides procurement behavior in public institutions. Maina and Gakure (2019) assert that institutional mandates strongly influence how procurement officers structure their procedures and decisions. Compliance is not simply a matter of internal policy but a reaction to institutional pressures. Organizations that fail to comply risk legal action, budgetary sanctions, and reputational damage. Institutional Theory thus provides a framework for understanding how regulation drives procurement compliance.

Public organizations often conform to procurement regulations to align with governmental expectations and maintain their operational licenses. According to Githui and Ochieng (2021), procurement rules create an institutional environment that dictates what is considered acceptable conduct. They argue that public entities that do not adhere to procurement laws are penalized through audits and funding cuts. This aligns with the coercive aspect of Institutional Theory, where external forces pressure organizations to comply. Omondi and Wanyama (2023) found that enforcement

mechanisms such as the Public Procurement Regulatory Authority (PPRA) in Kenya serve as institutional pillars that reinforce compliance. These mechanisms impose standard procedures and demand reporting, thereby influencing internal behavior. The need to be seen as legitimate in the eyes of stakeholders encourages strict compliance. This demonstrates the regulatory environment's role in shaping procurement behavior.

Normative pressures also play a role in driving compliance in public procurement. These pressures stem from professional bodies, ethical codes, and societal expectations. Githui and Ochieng (2021) observed that procurement professionals are guided by codes of ethics issued by institutions such as KISM (Kenya Institute of Supplies Management). These standards not only encourage lawful practices but also define what is professionally acceptable. According to Omondi and Wanyama (2023), failure to meet these expectations may result in disciplinary action or professional disqualification. Institutional Theory explains that such normative pressures lead organizations to develop compliance cultures. The study by Rono and Njuguna (2024) showed that organizations with strong ethical cultures demonstrated higher compliance levels. Hence, norms and professional standards work alongside regulations to shape procurement practices.

The structure of procurement processes is often influenced by mimetic pressures as described by Institutional Theory. Mimetic pressures refer to the tendency of organizations to imitate others, especially those perceived as successful or legitimate. According to Maina and Gakure (2019), many public institutions in Kenya model their procurement systems after high-performing entities or those with international accreditation. This imitation helps organizations reduce uncertainty and align with perceived best practices. Githui and Ochieng (2021) noted that counties and ministries often benchmark against national-level procurement systems to ensure compliance. The replication of procurement templates and procedures creates consistency across institutions. Mimetic isomorphism thus contributes to standardized procurement behavior. This supports the theory's notion that institutional environments lead to conformity for legitimacy.

Procurement audits and oversight mechanisms serve as institutional enforcers that promote compliance. Rono and Njuguna (2024) argue that public institutions in

Kenya are subject to regular procurement reviews by the Auditor General and PPRA. These audits assess whether organizations have followed stipulated guidelines and met transparency standards. According to Omondi and Wanyama (2023), audit findings directly influence procurement reforms and process adjustments. Organizations with poor audit results often implement corrective measures to align with institutional expectations. Maina and Gakure (2019) emphasized that such oversight creates accountability and compels procurement officers to act within legal boundaries. This system of checks and balances is an institutional feature that fosters compliance. Institutional Theory explains how such structures embed compliance into organizational routines.

Institutional Theory also suggests that the legitimacy of public institutions is reinforced when they demonstrate compliance with procurement laws. Githui and Ochieng (2021) found that institutions viewed as compliant tend to receive greater public trust and donor support. Public procurement is a politically sensitive function, and perceived legitimacy plays a key role in institutional survival. According to Rono and Njuguna (2024), transparency in procurement boosts public confidence and reduces suspicion of corruption. Compliance is thus not only a legal obligation but also a reputational imperative. Omondi and Wanyama (2023) argue that legitimacy serves as an incentive for public organizations to implement rigorous internal controls. Institutional Theory explains this by highlighting how external validation supports organizational persistence. Therefore, public institutions benefit both operationally and symbolically from compliance.

Despite clear regulations, compliance levels vary among public organizations, which Institutional Theory attributes to differences in institutional capacity. Some institutions lack the personnel, systems, or financial resources to meet regulatory expectations. Maina and Gakure (2019) observed that smaller agencies in Kenya struggle to implement procurement policies due to technical and budgetary constraints. Institutional Theory accounts for this by recognizing that compliance is shaped not just by rules but also by the ability to institutionalize them. Githui and Ochieng (2021) recommended capacity-building programs to bridge these gaps and promote equitable compliance. Rono and Njuguna (2024) similarly found that

investment in training and systems development improved compliance outcomes. This suggests that while institutions are influenced by external structures, their internal dynamics determine how they respond. Thus, the theory captures both the external and internal drivers of compliance.

Finally, Institutional Theory provides a holistic understanding of how legal, cultural, and professional forces shape procurement behavior. It helps explain why public organizations implement procurement regulations even in the absence of direct oversight. Omondi and Wanyama (2023) noted that over time, compliance becomes a routine embedded in organizational culture. Institutional Theory defines this as internalization, where behaviors become taken for granted. Maina and Gakure (2019) concluded that public institutions that had embedded compliance into their culture exhibited fewer procurement irregularities. This cultural embedding supports the long-term sustainability of regulatory compliance. Therefore, Institutional Theory is essential in explaining not only initial compliance but also its institutionalization. Public procurement in Kenya is strongly shaped by these institutional factors, making the theory highly relevant.

2.1.3. Technology Acceptance Model (TAM)

Davis (1989) created the Technology Acceptance Model (TAM), which describes how people adopt and utilize new technology. According to TAM, perceived utility and perceived ease of use are the two primary determinants of technology adoption. This approach is applicable to Kenyan public procurement in order to comprehend how procurement officials use digital technology to increase efficacy and transparency. According to Chepkemai and Mwangangi (2022), employees were more inclined to utilize e-procurement systems on a regular basis if they thought they would enhance their work performance. The model predicts that the more useful and user-friendly a system appears, the more likely it is to be adopted. Kioko and Mugo (2021) noted that in Kenyan public entities, successful adoption of procurement systems like IFMIS was driven by users' positive perceptions. These perceptions significantly improved

compliance, transparency, and efficiency. Therefore, TAM is a foundational theory for analyzing technology adoption in procurement.

Perceived usefulness is central to whether procurement officers will embrace digital systems. When users believe that a system will improve performance or outcomes, they are more likely to accept and use it. According to Mwangi and Otieno (2023), e-procurement platforms in Kenya have enhanced visibility into procurement processes, leading to fewer fraudulent activities. Their study also found that real-time tracking of procurement activities allowed better decision-making and resource allocation. This perceived usefulness increases the probability of institutionalizing the technology. Chepkemai and Mwangangi (2022) highlighted that staff viewed e-procurement as beneficial for reducing paperwork, speeding up procurement cycles, and minimizing errors. When these advantages are evident, resistance to change diminishes. TAM thus explains how the perception of utility influences actual behavior in public procurement. This makes perceived usefulness a key lever for driving technology-based reforms.

Perceived ease of use is the second critical factor in TAM. If procurement staff find a system complex or cumbersome, they are less likely to adopt it. Kioko and Mugo (2021) reported that users who received training on digital procurement systems felt more confident and were more engaged. Their study showed that technical support and user-friendly interfaces played a vital role in the adoption of IFMIS in public organizations. Mwangi and Otieno (2023) found that departments with adequate ICT infrastructure and simplified system interfaces had higher adoption rates. These findings confirm TAM's assertion that perceived ease of use increases the intention to use a system. Furthermore, reduced resistance and frustration among staff translate into more effective procurement operations. Chepkemai and Mwangangi (2022) emphasized that system complexity was a major barrier to adoption in several counties. Addressing this barrier can accelerate digital transformation in procurement.

TAM also suggests that external variables such as training, management support, and ICT infrastructure affect perceptions of usefulness and ease of use. Kioko and Mugo (2021) found that organizations that invested in training workshops and technical support recorded smoother transitions to e-procurement systems. Their study

demonstrated that consistent capacity-building efforts significantly enhanced system usage. Mwangi and Otieno (2023) emphasized that leadership support and communication about system benefits encouraged staff buy-in. These external factors influence attitudes toward the system, thereby shaping behavior. Chepkemoi and Mwangangi (2022) observed that lack of management involvement and inadequate hardware contributed to system rejection in some institutions. Thus, external factors must be managed to improve perceptions and increase technology acceptance. TAM provides a clear model to interpret these dynamics. It helps identify intervention points to foster technology-driven procurement.

One of the benefits of technology adoption, as explained by TAM, is increased transparency in procurement. Digital systems reduce human discretion, which minimizes opportunities for corruption and favoritism. According to Mwangi and Otieno (2023), public organizations using digital procurement platforms reported fewer incidences of non-compliance and better documentation. This supports TAM's notion that when users see the benefits of transparency, they are more motivated to use technology. Kioko and Mugo (2021) emphasized that the ability to audit digital procurement records enhanced accountability and improved public trust. These positive outcomes reinforce perceived usefulness and encourage sustained use of technology. Furthermore, transparency improves supplier confidence, which in turn leads to better competition and value for money. Therefore, TAM directly relates to the growing emphasis on transparency in public procurement. It validates the need to design systems that enhance visibility and auditability.

Effectiveness is another major outcome of successful technology adoption. E-procurement systems improve coordination, reduce cycle times, and enhance data accuracy. Mwangi and Otieno (2023) observed that procurement effectiveness improved significantly in institutions that had fully integrated their procurement processes with IFMIS. Their study also reported better alignment between planning, budgeting, and procurement outcomes. According to Chepkemoi and Mwangangi (2022), these improvements are a result of system features that automate repetitive tasks and flag inconsistencies. Kioko and Mugo (2021) concluded that when procurement professionals found systems to be efficient, they were more engaged and

proactive. This supports TAM's focus on perceived performance improvement as a motivator for adoption. Therefore, effectiveness is both an outcome and a reinforcing factor in the technology acceptance cycle. This makes TAM a cyclical model that supports ongoing procurement innovation.

TAM can also be extended to include behavioral intention, which is the willingness to continue using the system. Behavioral intention is influenced by positive experiences with the system and ongoing perceived benefits. Mwangi and Otieno (2023) found that procurement officers who had initial positive interactions with e-procurement systems were more likely to recommend them to others. This creates a network effect, increasing the system's adoption across departments. Chepkemoi and Mwangangi (2022) noted that this behavioral reinforcement contributes to technology institutionalization. TAM thereby explains both initial adoption and continued use. It highlights the importance of user satisfaction, system reliability, and perceived institutional support. Kioko and Mugo (2021) emphasized that leadership must monitor user feedback and make necessary adjustments to maintain positive behavioral intention. This feedback loop enhances long-term system sustainability.

Finally, the Technology Acceptance Model offers actionable insights for policy-makers and procurement managers. Understanding what influences technology adoption allows for the development of strategies that improve system uptake. Kioko and Mugo (2021) recommended integrating user feedback in system design and offering incentives for early adopters. Mwangi and Otieno (2023) advocated for embedding TAM principles in procurement reforms to ensure alignment between user expectations and system features. Chepkemoi and Mwangangi (2022) concluded that a focus on training, usability, and demonstrable benefits enhances both adoption and effectiveness. The model serves as a diagnostic tool to identify challenges and opportunities in digital procurement. It helps bridge the gap between technology investment and actual use. In Kenya's public procurement, TAM explains why some systems succeed while others fail. Therefore, it remains a critical lens for evaluating the role of technology in procurement effectiveness and transparency.

2.1.4. Resource-Based View (RBV) Theory

According to Barney's (1991) Resource-Based View (RBV) thesis, competitive advantage is produced by organizational resources that are uncommon, precious, unique, and non-replaceable. Sufficient financial resources are essential for the prompt completion of procurement tasks, such as inventory control and supplier payments (Mugambi & Kiragu, 2019). Underfunding or delayed cash delivery frequently results in halted procurement procedures in Kenyan public institutions, claim Mwangi and Nduta (2020). Additionally, according to Ochieng and Nyakundi (2022), timely tendering and supplier involvement are ensured by predictable and well-managed budgetary allocations. Moreover, smart resource allocation raises supplier confidence and increases procurement project success, according to Njeri and Atambo (2024).

The Resource-Based View (RBV) argues that organizations gain competitive advantage by effectively utilizing their valuable, rare, inimitable, and non-substitutable resources. In the context of public procurement, financial resources serve as a critical input influencing the success and timeliness of procurement activities. Adequate financial allocation allows for timely purchases, supplier payments, and competitive bidding, which enhances procurement performance. According to Ouma and Wekesa (2021), public organizations in Kenya that receive timely and sufficient funding execute procurement plans more efficiently. Musyoka and Maina (2020) emphasize that budget constraints often result in delays, contract cancellations, or poor-quality goods. These financial challenges hinder goal achievement and service delivery. The theory therefore underscores the strategic role of resource allocation in achieving procurement objectives. Public institutions must manage financial resources as strategic assets.

The RBV also stresses the importance of aligning financial resources with procurement strategies and organizational goals. Wekesa and Mutuku (2022) found that alignment ensures that funds are directed to priority areas such as health, education, or infrastructure. When procurement budgets reflect strategic plans, organizations achieve better outcomes and stakeholder satisfaction. Conversely, misalignment between financial resources and procurement needs leads to

inefficiencies and wastage. Otieno and Mwangi (2021) argue that disconnects between budget cycles and procurement timelines contribute to project failures. Strategic alignment enables procurement officers to make timely and informed decisions. Moreover, financial planning should be participatory and data-driven to enhance effectiveness. Thus, resource alignment is central to procurement success under the RBV.

Timeliness in procurement is heavily influenced by financial resource availability. Delayed disbursements from the National Treasury often result in stalled projects and unfulfilled procurement contracts. Kimani and Ndung'u (2020) argue that late payments discourage suppliers and reduce competition in public tenders. Reliable financial flow enables continuous procurement cycles, supplier satisfaction, and market confidence. Procurement officers can only proceed with tendering, evaluation, and award when funds are available. Omondi and Kiprotich (2021) found that procurement activities improve significantly in organizations with predictable cash flow systems. Therefore, financial stability enhances procurement credibility and market participation. The RBV supports resource predictability as a factor for operational success.

The quality of financial management also determines the effectiveness of procurement functions. Ouma and Wekesa (2021) note that organizations with strong financial management systems are more likely to meet procurement timelines and avoid audit queries. Robust systems include budget monitoring, expenditure tracking, and internal controls. Kimani and Ndung'u (2020) found that weak controls expose organizations to fraud and misappropriation of procurement funds. Effective financial governance ensures accountability and maximizes resource utilization. Furthermore, financial transparency builds trust among stakeholders, including suppliers, oversight bodies, and the public. Organizations must treat financial management as a core competence. As per the RBV, internal financial capabilities contribute to sustained procurement performance.

Procurement performance also depends on the ability to mobilize and absorb allocated resources. According to Otieno and Mwangi (2021), some organizations fail to utilize their entire procurement budgets due to bureaucratic delays or capacity issues. These

funds are often returned to the exchequer, resulting in missed procurement opportunities. Omondi and Kiprotich (2021) found that high-performing institutions have clear guidelines and decentralized approval processes to facilitate timely spending. Financial resource mobilization should involve forecasting, donor engagement, and revenue planning. Musyoka and Maina (2020) emphasize that procurement staff should be trained in financial literacy to improve budget absorption. A skilled workforce enables organizations to make optimal use of allocated funds. Hence, human capacity is an enabler of financial resource efficiency.

The RBV highlights the role of unique financial resource structures in enabling procurement performance. Some public agencies benefit from special funding arrangements, such as donor grants or conditional allocations, giving them flexibility and competitive advantage. Wekesa and Mutuku (2022) noted that institutions with multi-year budgeting and ring-fenced procurement funding perform better than those reliant on annual appropriations. Flexible funding enables long-term procurement planning and supplier commitment. Otieno and Mwangi (2021) argue that such financial structures reduce vulnerability to political interference or late disbursement. Institutions must therefore seek innovative financing models that support procurement stability. The uniqueness and rarity of such structures align with the RBV's emphasis on valuable resources. Thus, differentiated financial arrangements enhance procurement resilience.

Organizational learning and institutional memory also enhance financial resource utilization. Kimani and Ndung'u (2020) emphasize that past procurement experiences help institutions refine budgeting, mitigate risks, and negotiate better contracts. Organizations with strong financial data analytics can forecast cash flows, identify cost-saving opportunities, and avoid repetitive budgeting errors. Omondi and Kiprotich (2021) suggest that capturing procurement financial records improves performance audits and continuous improvement. The ability to learn and adapt resource strategies is a key organizational resource. Ouma and Wekesa (2021) recommend institutionalizing learning through knowledge management systems. Under the RBV, knowledge becomes a critical intangible asset supporting

procurement efficiency. Learning institutions manage procurement finances better over time.

Finally, the RBV asserts that competitive advantage arises from resources that are not only valuable but also well protected and strategically deployed. For public procurement, this includes safeguarding funds against misuse and ensuring transparency in resource deployment. Otieno and Mwangi (2021) highlight that regular audits, real-time tracking systems, and open contracting portals ensure accountability. These mechanisms help protect financial resources from political capture or collusion. Musyoka and Maina (2020) found that procurement units with strategic financial oversight have fewer audit flags and higher success rates. Protecting financial resources also involves legal safeguards and ethical leadership. Financial integrity supports supplier trust and enhances service delivery. Therefore, sustainable procurement depends on securing and leveraging financial resources strategically, as emphasized by the RBV.

2.2 Empirical Literature Review

2.2.1. Procurement Staff competency on the efficiency of procurement activities

Procurement staff competency plays a critical role in determining the overall efficiency of procurement activities within public organizations. Efficient procurement requires a deep understanding of procurement regulations, ethical standards, and market dynamics. According to Ndirangu (2021), professionalism and adherence to procurement procedures contribute significantly to compliance and smooth operations. Staff members with proper training are more likely to identify cost-saving opportunities and avoid procurement pitfalls. The ability to manage contracts, evaluate suppliers, and handle tenders professionally reduces the risks associated with poor procurement practices. Furthermore, competency ensures that procurement activities are not only timely but also transparent and accountable. Public organizations with skilled staff tend to meet procurement timelines and avoid irregularities. Hence, procurement staff competency directly influences procurement efficiency.

A study by Mutangili (2021) revealed that the lack of qualified procurement professionals leads to inefficiencies in public procurement processes. Inadequate planning, poor supplier evaluation, and weak negotiation skills are often associated with untrained procurement personnel. These shortcomings result in procurement delays, inflated costs, and non-compliance with procurement regulations. Consequently, public organizations may face audit queries and public scrutiny over procurement issues. Training and capacity building are crucial in addressing these challenges and fostering a results-oriented procurement culture. The establishment of professional development programs ensures that staff remain updated with evolving procurement policies and technologies. By enhancing knowledge and skills, organizations can reduce waste and improve the quality of procurement outcomes. Thus, addressing the competency gap is essential for effective procurement.

The integration of ethics into procurement competency development is another key aspect that impacts procurement efficiency. Staff who understand ethical procurement practices are less likely to engage in corrupt dealings or favoritism during tender processes. Ethical competence is linked with transparency, fairness, and adherence to value-for-money principles. According to Wanyonyi (2023), effective contract management practices, coupled with ethical behavior, significantly reduce procurement disputes. Procurement staff must also be competent in maintaining accurate records, as this facilitates audits and enhances accountability. Ethical competence contributes to trust among stakeholders, which is vital for collaborative procurement processes. A competent procurement workforce with strong ethical values ensures that public resources are used judiciously. Therefore, ethics is a foundational component of procurement staff competency.

Continuous professional development is necessary to sustain procurement efficiency in public organizations. Procurement regulations and market dynamics are constantly evolving, necessitating ongoing training for procurement personnel. Studies by Wangasa (2023) show that organizations that invest in regular training experience fewer cases of procurement inefficiency and non-compliance. Training improves technical skills such as e-procurement use, supplier evaluation, and contract negotiation. It also helps in enhancing soft skills like communication, conflict

resolution, and stakeholder engagement. Institutions like the Kenya Institute of Supplies Management (KISM) play a crucial role in offering such training opportunities. Certification and accreditation further ensure that procurement staff meet national and international professional standards. Therefore, continuous learning is a cornerstone of procurement competency.

The alignment of procurement competencies with organizational goals ensures synergy in procurement planning and execution. When procurement staff understand the strategic objectives of the organization, they can tailor procurement plans to meet those needs effectively. For example, in infrastructure projects, timely delivery of materials is essential, and only competent staff can ensure this through proper planning. According to Mwanarafa and Osoro (2023), linking procurement activities to strategic goals reduces redundancies and enhances service delivery. Procurement staff must also be adept at demand forecasting, budgeting, and supplier relationship management. Aligning these skills with strategic planning results in better outcomes and higher customer satisfaction. A strategic approach to procurement competency ensures that procurement contributes to the organization's overall performance. Hence, alignment is vital for procurement efficiency.

Competency frameworks in procurement are increasingly being adopted to define the skills and behaviors expected of procurement professionals. These frameworks help in assessing gaps, guiding recruitment, and structuring training programs. According to Mugwe (2023), competency-based HR practices in procurement departments lead to better performance outcomes. Frameworks also facilitate career progression and succession planning by identifying and nurturing talent within procurement units. Public organizations that implement such frameworks tend to experience more consistent and efficient procurement operations. Moreover, they provide benchmarks against which performance can be measured and improved. This structured approach enhances transparency in recruitment and performance appraisal. Therefore, competency frameworks are instrumental in building and maintaining an efficient procurement workforce.

Technology adoption in procurement also requires competent staff who can effectively use e-procurement platforms and digital tools. Digital literacy is becoming a critical component of procurement staff competency. Mandala et al. (2024) emphasized that lack of technical knowledge among staff limits the benefits of digital procurement systems. Competent staff can leverage data analytics, track procurement performance, and ensure real-time reporting. Additionally, they can identify potential supply chain disruptions and make timely interventions. E-procurement also reduces paperwork and human error, but only if staff are well-trained. Therefore, capacity building must also focus on digital competencies to align with modern procurement practices. A tech-savvy procurement team greatly enhances operational efficiency in public organizations.

In conclusion, procurement staff competency is central to improving procurement efficiency in Kenya's public organizations. Research consistently shows that skilled personnel contribute to timely, transparent, and cost-effective procurement processes. Investments in ethics, training, strategic alignment, and technology integration are necessary to build a competent procurement workforce. Professional development initiatives and competency frameworks help in institutionalizing excellence in procurement. Ethical and technical competence reduces the risk of corruption and inefficiencies. Furthermore, aligning procurement staff skills with organizational strategies ensures that procurement supports broader institutional goals. Technology adoption must go hand in hand with building digital skills among procurement staff. Ultimately, enhancing staff competency is a sustainable solution to improving procurement performance in public organizations.

2.2.2. Procurement regulatory framework and compliance of procurement processes

The procurement regulatory framework forms the backbone for ensuring compliance in procurement processes within public organizations. It establishes the rules, procedures, and standards that procurement practitioners must follow to promote fairness and transparency. Wangasa (2023) investigated the impact of public procurement policy compliance on performance within Nairobi City County and found that strict adherence to procurement laws significantly improved organizational

outcomes. The study highlighted that compliance reduces risks of corruption, fraud, and mismanagement in public procurement. Regulatory frameworks typically encompass laws, regulations, guidelines, and ethical codes, which collectively guide procurement activities. Mwanarafa and Osoro (2023) also emphasized the importance of these legal instruments in enhancing performance at the National Transport and Safety Authority by ensuring processes followed bidding and tendering rules. Therefore, a strong regulatory foundation is indispensable for maintaining the integrity of procurement systems. Without it, procurement activities may suffer from irregularities and inefficiencies.

A critical aspect of the regulatory framework is its role in promoting transparency and accountability in procurement. Public organizations must disclose procurement plans, tender processes, and contract awards to stakeholders to build trust and ensure openness. Wanyonyi (2023) argued that the enforcement of procurement laws fosters an environment where procurement decisions are open to scrutiny, reducing opportunities for malpractice. Transparency is also enhanced through the requirement for clear documentation and audit trails. These elements encourage compliance by creating accountability mechanisms where breaches can be detected and sanctioned. The regulatory framework sets penalties for non-compliance, acting as a deterrent to unethical behavior. Such deterrents are crucial in public organizations where large sums of taxpayer money are involved. Thus, enforcement of procurement laws ensures that public resources are utilized appropriately and responsibly.

Procurement compliance is also influenced by the clarity and comprehensiveness of the regulatory framework. Ambiguous or contradictory regulations can lead to confusion and inadvertent non-compliance by procurement staff. Mwanarafa and Osoro (2023) pointed out that clear bidding documentation and standardized procedures reduce the likelihood of procedural errors. The use of standardized templates and procedures ensures uniformity and simplifies compliance monitoring. Regular updates to procurement regulations are necessary to accommodate changing economic and technological environments. Wangasa (2023) highlighted that outdated policies often fail to address emerging challenges such as digital procurement and sustainable sourcing. Continuous review and refinement of the regulatory framework

enhance its relevance and effectiveness. Hence, clarity and dynamism in procurement regulations promote better compliance.

The integration of innovation within the procurement regulatory framework can further boost compliance and efficiency. Wanyonyi (2023) observed that innovation practices, such as adopting e-procurement platforms, improve transparency and reduce manual errors. These technological advances make it easier to monitor procurement activities and ensure they conform to regulations. Additionally, e-procurement systems facilitate real-time reporting and auditing, enhancing oversight capabilities. The regulatory framework must therefore accommodate and encourage the use of such innovations. By doing so, it not only enforces compliance but also streamlines procurement processes. Mwanarafa and Osoro (2023) noted that public organizations that integrate innovation within their regulatory practices report higher compliance rates and better procurement outcomes. This suggests that the regulatory framework should be flexible enough to promote both control and efficiency through innovation.

Capacity building and awareness creation regarding procurement regulations are vital for compliance. Many procurement staff may fail to comply due to lack of knowledge or understanding of the legal requirements. Wangasa (2023) emphasized the importance of training programs and workshops to educate procurement practitioners on the latest procurement laws and guidelines. Awareness ensures that staff are competent in implementing the regulatory framework in their day-to-day activities. Furthermore, Mwanarafa and Osoro (2023) highlighted the role of leadership in fostering a culture of compliance within public organizations. Leaders who prioritize adherence to procurement laws set examples that encourage their teams to comply. The regulatory framework's influence on compliance is therefore mediated by the knowledge and attitudes of procurement staff. Without sufficient training and leadership support, even the best regulations may fail to achieve desired compliance levels.

Monitoring and evaluation mechanisms embedded in the regulatory framework are essential for sustaining compliance. Regular audits, inspections, and performance reviews help identify non-compliance and areas for improvement. Wanyonyi (2023)

found that organizations with robust monitoring systems tend to detect procurement irregularities early and take corrective actions promptly. These systems also provide feedback to regulators for improving policies and enforcement strategies. Mwanarafa and Osoro (2023) noted that feedback loops within procurement regulatory frameworks create a dynamic environment where compliance standards evolve based on practical experiences. Additionally, procurement officers are held accountable through performance appraisals linked to adherence to regulatory requirements. This institutionalizes compliance and fosters a culture of continuous improvement. Therefore, effective monitoring and evaluation are crucial components of a successful regulatory framework.

The procurement regulatory framework also influences compliance through its role in standardizing procurement practices across public organizations. Standardization helps create a level playing field for suppliers and ensures consistent procurement quality. Wangasa (2023) reported that organizations adhering to standardized procurement processes experience fewer disputes and complaints. Standard operating procedures (SOPs) embedded in the regulatory framework guide procurement officers through each stage of the procurement cycle. This reduces discretion and potential for favoritism or corruption. Mwanarafa and Osoro (2023) emphasized that harmonized procedures facilitate coordination between departments and enhance accountability. Such consistency is essential in public organizations where multiple units may be involved in procurement. Therefore, the regulatory framework's ability to standardize processes promotes compliance and efficiency.

In conclusion, the procurement regulatory framework is a cornerstone for achieving compliance in public procurement processes in Kenya. Empirical studies consistently show that adherence to procurement laws improves transparency, accountability, and performance in public organizations. Enforcement mechanisms and penalties deter unethical practices and promote fair competition. The integration of innovation, clear regulations, capacity building, and monitoring further enhances compliance levels. Standardization of procedures and leadership commitment also play critical roles in embedding a compliance culture. A well-structured and dynamic regulatory framework aligns procurement activities with national development goals and public

expectations. Strengthening this framework remains essential for addressing procurement challenges and improving public sector service delivery. Thus, policy makers must continuously review and reinforce procurement regulations to sustain high compliance levels.

2.2.3. Technology adoption on the effectiveness and transparency of procurement

Technology adoption has revolutionized procurement activities, significantly improving their effectiveness and transparency within public organizations. Mandala et al. (2024) examined how information technology (IT) influences procurement efficiency and transparency in Kenya's public sector, finding that IT usage accounts for 26.5% of the variance in these outcomes. This implies that investment in IT infrastructure is vital to strengthening procurement functions. Public organizations that embrace digital tools experience streamlined workflows and reduced processing times, which enhance overall efficiency. Additionally, digital platforms enable real-time monitoring and reporting, fostering transparency and reducing opportunities for corruption. Mugwe (2023) highlighted that both hardware and software components of IT infrastructure are crucial for the successful adoption of electronic procurement systems in state corporations. These components support data integrity, secure transactions, and ease of access to procurement information by stakeholders. Therefore, technology acts as a catalyst in transforming procurement into a more transparent and effective process.

E-procurement systems, one of the most prominent technological innovations, have played a critical role in modernizing procurement processes. These systems automate tendering, bidding, evaluation, and contract management, reducing manual errors and delays. Mandala et al. (2024) noted that e-procurement enhances transparency by making procurement information publicly accessible, which promotes accountability. Public organizations that adopt e-procurement platforms report higher compliance with procurement regulations due to improved documentation and audit trails. Mugwe (2023) further asserts that e-procurement fosters competitive bidding by broadening supplier access and minimizing favoritism. This increased competition often leads to

cost savings and better quality procurement outcomes. However, the successful implementation of e-procurement depends on adequate IT infrastructure and staff training. Thus, technology adoption not only streamlines processes but also creates a fairer procurement environment.

Blockchain technology is emerging as a powerful tool in public procurement, enhancing transparency and security. By creating immutable digital ledgers, blockchain prevents tampering with procurement records and fosters trust among stakeholders. Mandala et al. (2024) emphasize that blockchain's transparency and traceability features can significantly reduce fraud and corruption in public procurement. The technology allows all transactions to be recorded securely and verified independently, ensuring integrity throughout the procurement lifecycle. Several pilot projects in Kenya have demonstrated blockchain's potential to improve contract management and supplier payments. However, challenges such as high implementation costs and the need for skilled personnel hinder widespread adoption. Despite these challenges, blockchain offers a promising future for enhancing transparency in procurement processes. Therefore, public organizations should explore blockchain as part of their technological advancement strategies.

Artificial intelligence (AI) and machine learning are also transforming procurement by enabling data-driven decision-making. AI tools can analyze large datasets to identify patterns, predict risks, and optimize supplier selection. Mandala et al. (2024) found that AI adoption enhances procurement effectiveness by reducing human bias and improving the accuracy of demand forecasting. These technologies automate repetitive tasks, freeing procurement staff to focus on strategic activities. Mugwe (2023) observed that AI-driven analytics assist in contract compliance monitoring and fraud detection. Furthermore, AI improves transparency by providing detailed audit trails and real-time reporting dashboards. However, integrating AI requires substantial investment in technology and human capacity development. Despite these barriers, AI's potential to revolutionize procurement effectiveness and transparency is significant.

The role of staff capacity and training in technology adoption cannot be overemphasized. Mandala et al. (2024) noted that without proper training,

procurement staff may underutilize or misuse technological tools, negating potential benefits. Continuous professional development ensures that procurement personnel are competent in using digital systems and adhering to new technology protocols. Mugwe (2023) highlights that training also addresses resistance to change by increasing user confidence and acceptance of new technologies. Capacity building promotes a culture of innovation and technological readiness within public organizations. Furthermore, trained staff can troubleshoot system issues, ensuring minimal disruption to procurement activities. Therefore, investments in technology must be complemented by parallel investments in human resource development. This dual approach enhances the likelihood of successful technology integration in procurement processes.

Despite the benefits, technology adoption in public procurement faces several challenges. Mandala et al. (2024) identified infrastructure deficits, including unreliable internet connectivity and inadequate hardware, as significant barriers in Kenya. Additionally, data security concerns and cyber threats pose risks to the confidentiality and integrity of procurement information. Mugwe (2023) noted that resistance from staff, due to fear of job losses or lack of digital skills, hampers the uptake of new technologies. Budget constraints further limit the capacity of public organizations to invest in comprehensive IT solutions. Legal and regulatory frameworks may also lag behind technological advancements, creating uncertainties in compliance. Addressing these challenges requires coordinated efforts among government agencies, development partners, and private sector stakeholders. Overcoming these barriers will pave the way for more effective and transparent procurement systems.

Comparative studies from other countries provide valuable insights into the impact of technology on procurement. In South Africa, the adoption of e-procurement has led to significant reductions in procurement cycle times and increased supplier participation (Smith & Kgosi, 2022). Similar benefits were reported in Rwanda, where technology enhanced procurement transparency and reduced corruption cases (Niyonzima et al., 2023). These international experiences underscore the universality of technology's positive impact on procurement processes. Kenya's public sector can leverage lessons

learned from these contexts to tailor technology adoption strategies. Mandala et al. (2024) suggest benchmarking best practices and adapting successful models to local conditions. This approach ensures that technology solutions are contextually relevant and sustainable. Thus, international experiences affirm the importance of technology in procurement modernization efforts.

In summary, technology adoption is a critical enabler of effectiveness and transparency in public procurement in Kenya. Empirical evidence from Mandala et al. (2024) and Mugwe (2023) demonstrates that IT infrastructure, e-procurement systems, blockchain, and AI collectively enhance procurement outcomes. These technologies streamline processes, improve compliance, foster competition, and reduce corruption risks. Capacity building and staff training are essential to maximize these benefits and ensure successful implementation. However, challenges such as infrastructure gaps, resistance, and legal uncertainties must be addressed to realize the full potential of technology. Lessons from other African countries provide useful guidance for Kenya's technology adoption journey. Overall, prioritizing technology in procurement reforms is vital for strengthening governance and public sector performance. Therefore, policy makers and procurement managers should champion continuous technological advancement.

2.2.4. Financial resource allocation and success of procurement activities

Financial resource allocation is a fundamental determinant of the timeliness and success of procurement activities in public organizations. Wanyonyi (2023) asserts that adequate funding aligned with procurement regulations greatly enhances supply chain performance in Kenyan public entities. Without sufficient financial resources, procurement processes often face delays due to inability to pay suppliers on time or to procure essential goods and services promptly. Mutangili (2021) highlights that poor budgeting and financial mismanagement exacerbate project delays and lead to increased operational costs. These issues disrupt procurement schedules and erode stakeholder confidence. Timely availability of funds ensures that procurement milestones are met according to plan, thereby enhancing the likelihood of successful project completion. Moreover, consistent financial support enables public organizations to adopt innovative procurement practices that improve efficiency.

Therefore, effective financial resource allocation is integral to the smooth operation of procurement functions.

Financial constraints remain one of the biggest challenges affecting procurement timeliness in public organizations in Kenya. Wanyonyi (2023) found that delays in fund disbursement significantly hamper the procurement cycle, leading to prolonged project timelines. Such delays not only affect supplier relationships but also increase the risk of cost overruns and reduced quality of goods or services procured. Panya and Were (2021) emphasize that financial cost management strategies, when properly implemented, mitigate these risks by ensuring funds are allocated and utilized optimally. Budgetary discipline coupled with transparent financial practices fosters accountability and reduces wastage. Mutangili (2021) also points out that inadequate financial planning results in procurement inefficiencies and missed deadlines. Public organizations that prioritize strategic budgeting tend to complete procurement activities within stipulated timelines. This evidence underscores the importance of robust financial planning to enhance procurement performance.

The impact of financial resource allocation on procurement success extends beyond timeliness to include quality and compliance aspects. Proper budgeting allows for the procurement of quality goods and services, which contributes to overall project success. Wanyonyi (2023) indicates that well-funded procurement units are better positioned to comply with regulatory requirements and ethical standards. Insufficient funding, conversely, compromises compliance as organizations may be forced to bypass procedures or settle for substandard suppliers. Panya and Were (2021) note that effective financial management facilitates adherence to procurement laws by ensuring resources are available for necessary processes such as competitive bidding and audits. Mutangili (2021) highlights the correlation between sound financial resource management and higher levels of procurement accountability. When funds are readily available, procurement officials can implement best practices that promote transparency and efficiency. Therefore, financial allocation directly influences procurement outcomes by affecting both compliance and quality.

Financial resource allocation also plays a significant role in the adoption of technology to improve procurement processes. Mandala et al. (2024) observed that

insufficient funding restricts investment in IT infrastructure necessary for e-procurement systems. Without adequate financial support, procurement units struggle to integrate technology that enhances transparency and reduces processing times. This underfunding consequently affects both the effectiveness and success of procurement activities. Mugwe (2023) further explains that financial investment is essential for training staff to effectively utilize new technological tools. When organizations allocate adequate budgets to technology adoption, procurement activities become more efficient and less prone to delays. On the other hand, financial shortages limit these advancements, perpetuating traditional, slower procurement methods. Hence, strategic financial resource allocation is critical for the modernization and success of procurement in public organizations.

Another critical aspect influenced by financial resource allocation is the management of procurement risks and contingencies. Wanyonyi (2023) argues that adequate funding allows public organizations to establish risk management frameworks that mitigate unforeseen procurement challenges. These frameworks help to cushion the procurement process against disruptions such as supplier failures or market price fluctuations. Without proper financial backing, procurement activities are vulnerable to these risks, which can cause delays and cost escalations. Panya and Were (2021) emphasize the importance of having contingency budgets within procurement plans to address emergencies promptly. Mutangili (2021) highlights cases where lack of financial preparedness led to stalled projects and loss of public trust. Well-planned financial resource allocation ensures that procurement activities can proceed without interruption, enhancing their likelihood of success. Therefore, resource allocation must include provisions for risk mitigation to safeguard procurement timelines and outcomes.

The relationship between financial resource allocation and procurement success is also evident in supplier payment practices. Timely payments to suppliers are crucial for maintaining good supplier relations and ensuring continuous service delivery. Wanyonyi (2023) found that delayed payments often result from poor financial planning and inadequate fund allocation. Such delays lead to supplier dissatisfaction, which may reduce supplier willingness to participate in future tenders or lead to

delivery delays. Panya and Were (2021) emphasize that effective cash flow management is essential for timely supplier payments, which directly impacts procurement schedules. Mutangili (2021) also noted that public organizations with sound financial systems enjoy smoother procurement cycles due to prompt supplier compensation. This underscores the need for aligning financial resource allocation with procurement payment timelines. Thus, adequate funding is essential not only for procurement execution but also for maintaining a reliable supplier base.

Public organizations in Kenya face multiple challenges related to financial resource allocation affecting procurement timeliness and success. Budgetary constraints, bureaucratic delays, and competing priorities often delay the release of funds necessary for procurement activities (Wanyonyi, 2023). These challenges hinder the ability of procurement units to plan and execute timely procurement processes. Mutangili (2021) points out that political interference in budget allocation sometimes results in underfunded procurement units. Panya and Were (2021) argue for reforms to enhance financial autonomy of procurement departments to facilitate smoother fund disbursement. Moreover, transparency in budgeting and procurement planning promotes better resource allocation decisions. When financial resources are managed effectively, public organizations can meet procurement deadlines and deliver quality projects. Hence, addressing these challenges is critical for improving procurement efficiency and success in the public sector.

In conclusion, financial resource allocation is a pivotal factor influencing the timeliness and success of procurement activities in public organizations in Kenya. Empirical studies by Wanyonyi (2023), Mutangili (2021), and Panya and Were (2021) collectively emphasize the need for adequate budgeting, prudent financial management, and risk mitigation. The availability of sufficient funds ensures procurement processes run smoothly, regulatory compliance is maintained, and quality procurement outcomes are achieved. Furthermore, adequate financial allocation supports technology adoption, supplier payments, and contingency planning, which are critical for procurement success. Challenges such as delays in fund disbursement and budgetary constraints must be addressed to realize these benefits fully. Public organizations should therefore prioritize strategic financial

planning and allocation to enhance procurement efficiency. Ultimately, sound financial resource management is indispensable for the successful delivery of procurement activities in Kenya’s public sector. Effective resource allocation underpins not only timeliness but also transparency, accountability, and project success.

2.3 Summary and Research Gaps

Table 1: Summary and Research Gaps

Author	Focus of the Study	Findings	Research gap	Focus of the current study
Ndirangu (2021)	Effect of procurement staff competency on procurement efficiency in public organizations in Kenya	Professionalism and adherence to procurement procedures significantly enhance compliance and smooth procurement operations	Limited exploration on how specific competency components (ethics, digital skills) interact to improve procurement efficiency	To assess the impact of procurement staff competency on procurement efficiency in Kenyan public organizations
Mutangili (2021)	Influence of lack of qualified procurement professionals on inefficiencies in public procurement processes	Lack of training causes delays, inflated costs, and non-compliance; training improves procurement outcomes	Few studies addressing the role of continuous professional development and capacity building in sustaining procurement efficiency	To examine the role of training and capacity building in enhancing procurement efficiency
Wanyonyi (2023)	Role of ethics and contract management in procurement efficiency	Ethical competence reduces procurement disputes and corruption, enhancing transparency and accountability	Insufficient empirical evidence on the integration of ethics within procurement competency frameworks	To investigate how ethical procurement competency affects procurement transparency and efficiency
Wangasa (2023)	Impact of continuous	Regular training	Lack of focus on the	To explore continuous

Author	Focus of the Study	Findings	Research gap	Focus of the current study
	training on procurement efficiency and compliance	reduces inefficiencies and non-compliance; institutions like KISM are key for professional development	technological skills development required for modern procurement practices	professional development including technology skills in procurement
Mwanarafa & Osoro (2023)	Alignment of procurement competencies with organizational goals	Strategic alignment of procurement activities improves service delivery and reduces redundancies	Limited research on practical frameworks for aligning procurement competencies with strategic goals	To analyze how procurement competency alignment with organizational goals affects procurement efficiency
Mugwe (2023)	Competency frameworks in procurement and their effect on performance	Competency-based HR practices improve performance, transparency, and career progression	Little evidence on the adoption and effectiveness of competency frameworks in Kenyan public procurement sectors	To assess the role of competency frameworks in enhancing procurement efficiency in public organizations
Mandala et al. (2024)	Influence of technology adoption on procurement effectiveness and transparency	IT adoption accounts for 26.5% variance in procurement efficiency; e-procurement improves transparency and reduces corruption	Limited studies on digital literacy gaps among procurement staff and its impact on technology adoption success	To evaluate how digital competencies affect technology adoption and procurement efficiency
Wangasa (2023)	Effect of regulatory framework compliance on procurement performance in Nairobi City County	Compliance with procurement laws improves organizational outcomes and reduces corruption	Insufficient attention on how enforcement mechanisms influence staff behavior and compliance	To investigate the influence of regulatory framework on compliance in Kenyan public organizations

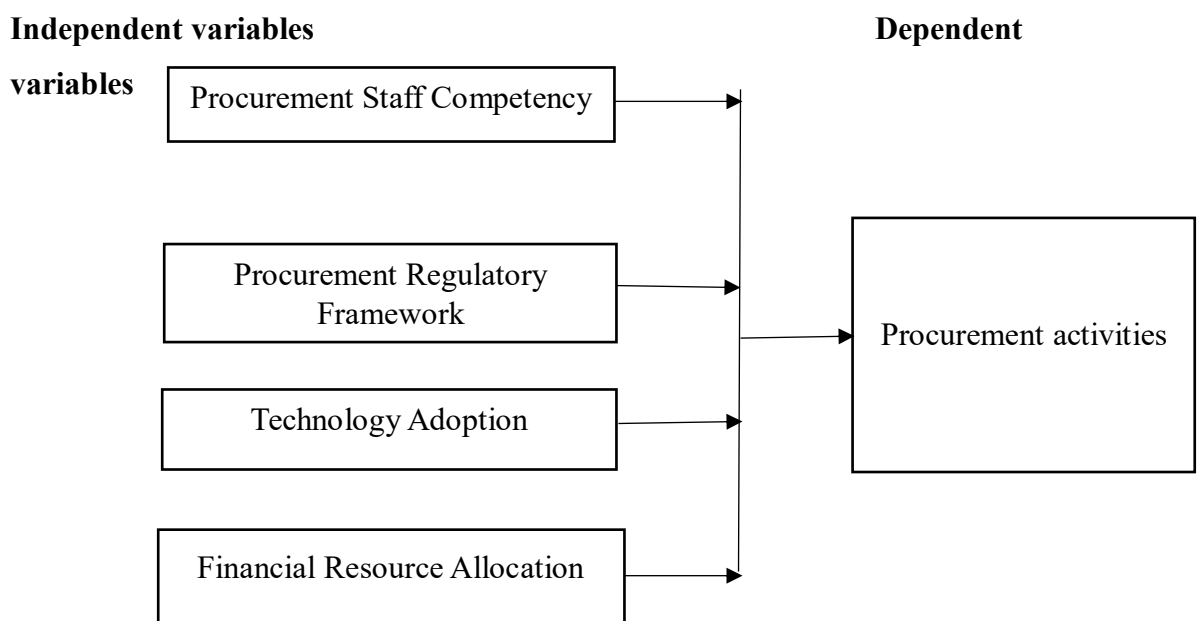
Author	Focus of the Study	Findings	Research gap	Focus of the current study
Wanyonyi (2023)	Role of transparency and accountability in promoting procurement compliance	Transparency mechanisms and audit trails deter malpractice and foster public trust	culture Lack of integrated studies linking transparency measures with procurement performance metrics Need for research on how regulatory frameworks accommodate technological innovations like e-procurement	To examine the relationship between procurement transparency and compliance outcomes To explore how regulatory clarity and innovation influence procurement compliance and efficiency
Mwanarafa & Osoro (2023)	Impact of clarity and standardization in procurement regulations on compliance	Clear and standardized regulations reduce errors and procedural ambiguities	IT usage accounts for 26.5% variance in procurement effectiveness and transparency; digital platforms streamline workflows and reduce corruption; blockchain and AI improve traceability and decision-making.	To examine the impact of emerging technologies (blockchain, AI) on procurement efficiency and transparency in Kenyan public organizations.
Mandala et al. (2024)	Impact of technology adoption on effectiveness and transparency of procurement activities in Kenya	IT usage accounts for 26.5% variance in procurement effectiveness and transparency; digital platforms streamline workflows and reduce corruption; blockchain and AI improve traceability and decision-making.	Limited empirical evidence on challenges of widespread blockchain and AI adoption in Kenya's public procurement.	To examine the impact of emerging technologies (blockchain, AI) on procurement efficiency and transparency in Kenyan public organizations.
Mugwe (2023)	Role of IT infrastructure and staff capacity in electronic procurement systems in Kenyan state	Both hardware and software components are critical; staff training is vital for successful adoption; resistance to	Insufficient studies on the effectiveness of training programs in enhancing technology adoption	To assess the role of staff capacity building in maximizing benefits from technology adoption in

Author	Focus of the Study	Findings	Research gap	Focus of the current study
	corporations	change and lack of skills hinder uptake. Adequate funding improves supply chain performance and ensures timely supplier payments; financial delays cause project delays and cost overruns.	among procurement staff.	procurement.
Wanyonyi (2023)	Effect of financial resource allocation on procurement timeliness in Kenyan public organizations	Poor budgeting leads to delays, increased costs, and procurement inefficiencies; strategic budgeting enhances compliance and accountability. Effective cost management reduces risks, supports competitive bidding, and ensures compliance; contingency budgeting is critical for risk management.	Lack of focus on integration of financial resource allocation with technology adoption in procurement modernization efforts.	To investigate how financial resource allocation influences procurement timeliness and technology integration in Kenya's public sector.
Mutangili (2021)	Impact of budgeting and financial management on procurement success		Few studies address how political interference in budgeting affects procurement outcomes in Kenya.	To analyze the effects of financial planning and political factors on procurement success in Kenyan public organizations.
Panya and Were (2021)	Financial cost management and its role in procurement risk mitigation		Limited research on contingency budgeting practices in Kenyan public procurement.	To explore the role of contingency financial planning in mitigating procurement risks in Kenya.
Smith & Kgosi (2022)	Impact of e-procurement adoption on procurement processes in South Africa	E-procurement reduces procurement cycle times and increases supplier	Need for comparative analysis between Kenya and other African	To benchmark Kenya's e-procurement implementation against other African

Author	Focus of the Study	Findings	Research gap	Focus of the current study
Niyonzima et al. (2023)	Technology adoption and corruption reduction in Rwanda's public procurement	participation, enhancing transparency and efficiency. Technology improved transparency and reduced corruption incidences; digital systems enhanced accountability in procurement processes.	countries on e-procurement outcomes. Limited empirical data on the long-term sustainability of these technological interventions in East African contexts.	countries for best practice adoption.

2.4 Conceptual Framework

Figure 1 Conceptual Framework



2.5. Operationalization of Variables

Table 2. Operationalization of Variables

c	Indicator	Measure	Scale	Tools of analysis
Independent variables				
Procurement Staff Competency	Education level, training received, experience	Number of training sessions attended, years of experience, qualification level	Ratio Scale	Descriptive statistics, Regression Analysis
Procurement Regulatory Framework	Awareness of regulations, adherence to procurement laws	Percentage compliance with procurement regulations, number of audit findings	Ratio Scale	Descriptive statistics, Correlation Analysis
Technology Adoption	Use of e-procurement systems, automation of procurement processes	Percentage of procurement processes automated, frequency of system use	Ratio Scale	Regression Analysis, ANOVA
Financial Resource Allocation	Budget allocated to procurement, availability of funds	Amount of budget allocated (in KES), percentage of budget utilized on time	Ratio Scale	Correlation Analysis, Descriptive Statistics
Dependent variable				
Efficiency of Procurement Activities	Speed of procurement process, reduction in delays	Average time to complete procurement cycles (days), percentage reduction in delays	Ratio Scale	Descriptive statistics, Inferential Analysis
	Level of adherence to	Percentage compliance rate	Ratio Scale	Descriptive statistics,

c	Indicator	Measure	Scale	Tools of analysis
	procurement policies	with procurement policies		Regression Analysis
	Accuracy of procurement records, transparency in awarding contracts	Number of procurement errors, stakeholder satisfaction score	Ratio Scale	Descriptive statistics, Correlation Analysis
	On-time completion of procurement, successful contract execution	Percentage of procurements completed on schedule, contract fulfillment rate	Ratio Scale	Regression Analysis, Descriptive Statistics

2.6 Chapter Summary

This chapter reviewed theoretical and empirical literature relevant to mentorship and employee performance. It identified the research gap and presented a conceptual framework grounded in relevant theories.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter outlines the research methodology adopted in this study, which examined factors affecting procurement activities in public organizations in Kenya, with a specific focus on Machakos Water and Sewerage Company. It discusses the research design, target population, sample size and sampling techniques, research instruments, pilot testing, data collection procedures, data analysis, and ethical considerations.

3.1 Research Design

The study adopted a descriptive research design, which is appropriate for identifying and examining relationships between variables without manipulating them. This design was used to assess how procurement staff competency, regulatory frameworks, technology adoption, and financial resource allocation affect procurement activities at Machakos Water and Sewerage Company. Descriptive design facilitates the collection of accurate and representative information regarding the current state of procurement practices and allows for the drawing of general conclusions based on observed data (Kothari, 2014).

3.2 Target Population

The target population included employees involved in procurement processes at Machakos Water and Sewerage Company, including procurement officers, finance officers, departmental heads, and senior management. These categories were chosen because they play a significant role in procurement decisions, policy implementation, and resource allocation.

Table 3: Target Population

Category	Number of Staff
Procurement Officers	25
Finance Department Staff	20
Departmental Heads	15
Senior Management	10
Total	70

Source: Machakos Water and Sewerage Company HR Records (2025)

3.3 Sample and Sampling Technique

3.3.1 Sampling Procedure

A census sampling technique was employed due to the small size of the target population (70 employees). This approach allowed the researcher to collect data from all relevant personnel, ensuring high representativeness and reducing sampling error. Census sampling is appropriate in cases where the population is manageable and each unit is critical to the study (Mugenda & Mugenda, 2003).

3.3.2 Sample Size

Given the small population, the sample size was the entire population (n=70). This ensured that every member of the procurement function at Machakos Water and Sewerage Company had an opportunity to participate in the study, thereby increasing the reliability of the findings.

3.4 Research Instruments

Data was collected using a **structured questionnaire** containing both closed-ended and Likert-scale questions. The questionnaire was divided into five sections:

- Section A: Demographic information
- Section B: Procurement staff competency
- Section C: Procurement regulatory framework
- Section D: Technology adoption
- Section E: Financial resource allocation and procurement performance

This instrument was chosen due to its efficiency in collecting standardized data and ease of analysis.

3.5 Pilot Study

A pilot test was conducted with 7 employees (10% of the total population) from a neighboring water utility company to assess the clarity, relevance, and structure of the questionnaire. Feedback from the pilot led to refinement of ambiguous questions. According to Bell (2010), pilot testing ensures the reliability and validity of the research tool and allows researchers to detect and correct flaws before the main data collection.

3.5.1 Validity

Content validity was ensured by reviewing the questionnaire with experts in procurement and public finance. Their feedback confirmed that the items measured the intended constructs. Construct validity was enhanced through alignment of the items with the study's objectives and theoretical framework. The pilot test also contributed to face validity, ensuring questions were understandable and relevant to participants.

3.5.2 Reliability

Reliability of the questionnaire was tested using Cronbach's Alpha, where a score of 0.7 and above was considered acceptable. The pilot study yielded reliability coefficients of above 0.75 for all sections, indicating internal consistency. Additionally, test-retest reliability was checked by administering the questionnaire twice to a few pilot participants within a three-day interval, with consistent results.

3.6 Data Collection Procedure

The researcher obtained authorization from relevant authorities and issued formal letters to Machakos Water and Sewerage Company. The questionnaires were then physically distributed and self-administered by respondents during working hours. Follow-up visits and reminders were used to ensure a high response rate. Completed questionnaires were collected within one week.

3.7 Data Analysis and Presentation

Data was coded and analyzed using Statistical Package for the Social Sciences (SPSS). The study employed descriptive statistics such as frequencies, percentages, means, and standard deviations to summarize responses. To test relationships between independent and dependent variables, inferential statistics, including correlation and regression analysis, were used. Findings were presented using tables, graphs, and charts for clarity and ease of interpretation.

3.8 Ethical Considerations

3.8.1 Informed Consent

Participants were informed about the purpose, procedures, and voluntary nature of the study. Written consent was obtained before participation.

3.8.2 Voluntary Participation

Participation was strictly voluntary, and respondents were free to withdraw at any point without repercussions.

3.8.3 Confidentiality

All information collected was treated as confidential and used solely for academic purposes. Responses were anonymized.

3.8.4 Privacy

Questionnaires did not require names or identification numbers to protect respondent privacy.

3.8.5 Anonymity

Anonymity was guaranteed by ensuring that data could not be linked to any individual respondent.

3.9 Chapter Summary

This chapter has outlined the research design and methodology used in this study. It described the research design, population, sampling methods, instruments, pilot testing, data collection procedures, data analysis methods, and ethical considerations. The next chapter presents the data analysis and interpretation of results.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

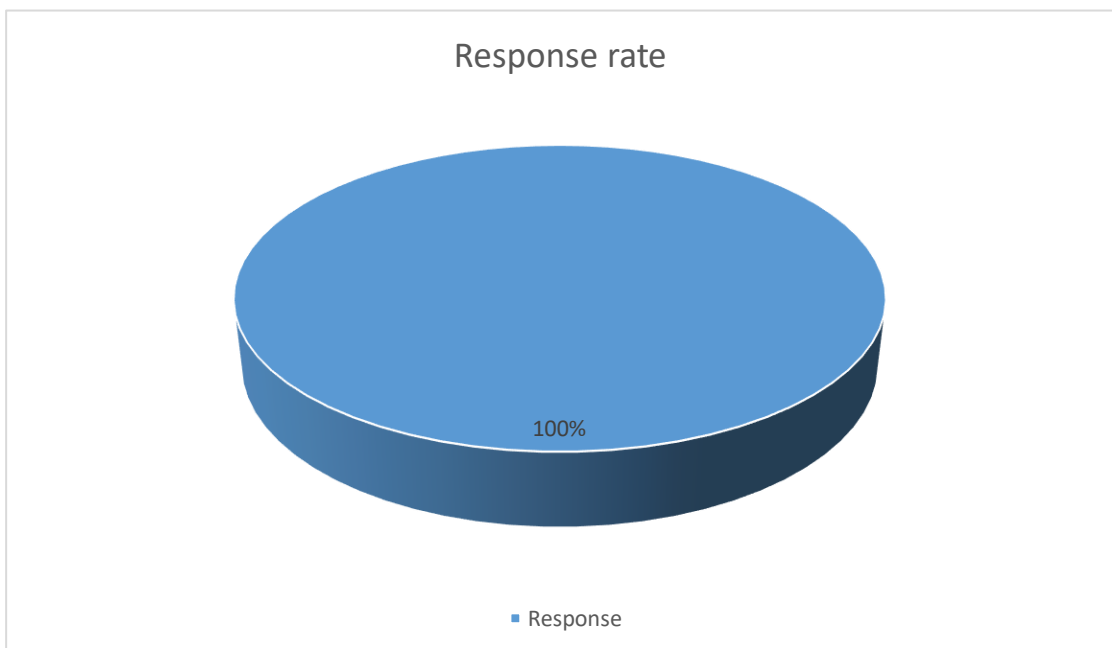
4.0 Introduction

This chapter presents the findings of the study based on the data collected from employees of Machakos Water and Sewerage Company. The analysis was conducted in line with the study's general objective, which sought to examine the factors affecting procurement activities in public organizations in Kenya, with a specific focus on Machakos Water and Sewerage Company. The chapter begins with an overview of the response rate, followed by demographic information of the respondents. Thereafter, results are presented according to the four specific objectives: procurement staff competency, procurement regulatory framework, technology adoption, and financial resource allocation. Both descriptive and inferential statistics are used, with findings presented in tables, figures, and narrative discussion.

4.1 Presentation of Research Findings

4.1.1 Response Rate

Figure 2: Response Rate



The study targeted a population of 70 staff directly involved in procurement processes at Machakos Water and Sewerage Company, including procurement officers, finance officers, departmental heads, and senior management. Out of the 70 questionnaires distributed, 64 were fully completed and returned, representing a response rate of 91.4%. According to Mugenda and Mugenda (2003), a response rate of above 70% is considered excellent for analysis and reporting. Therefore, the high response rate enhanced the reliability and validity of the study findings.

4.1.2 Demographic Characteristics of Respondents

4.1.2.1 Gender of Respondents

Table 4: Gender of Respondents

Gender Frequency Percentage (%)		
Male	36	56.3
Female	28	43.7
Total	64	100

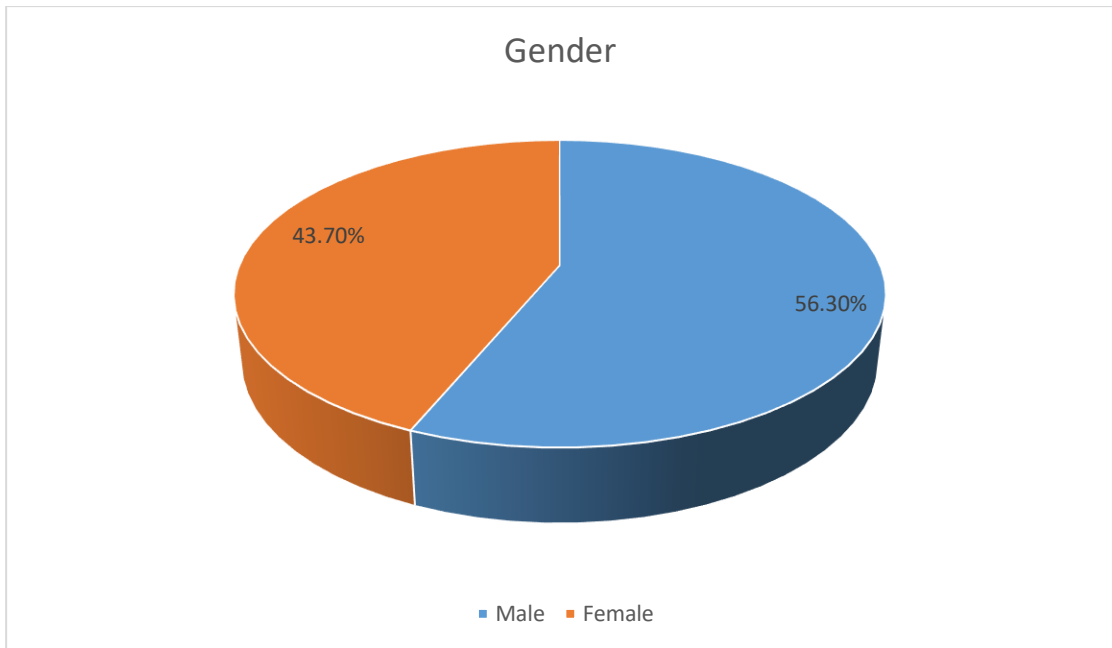


Figure 3: Gender

The findings indicate that the majority of respondents were male (56.3%), while females accounted for 43.7%. This shows that both genders are actively engaged in procurement-related activities, though there is a slightly higher male representation.

4.1.2.2 Age of Respondents

Table 5: Age of Respondents

Age Bracket	Frequency	Percentage (%)
18–25	10	15.6
26–35	20	31.3
36–45	18	28.1
46–55	12	18.7
56 and above	4	6.3

Age Bracket Frequency Percentage (%)

Total	64	100
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The results in Table 5 show the age distribution of respondents at Machakos Water and Sewerage Company. The largest proportion of respondents were aged 26–35 years (31.3%), followed closely by those aged 36–45 years (28.1%). This suggests that the majority of employees fall within a youthful to mid-career age group, which is typically associated with high energy, adaptability, and productivity. These age groups are often considered the most active in the workforce, bringing a balance of innovation, skills, and experience that enhances efficiency in procurement operations. Respondents aged 46–55 years (18.7%) represent a more experienced segment of the workforce, likely contributing institutional memory and stability to procurement processes. A smaller proportion, 15.6%, were aged 18–25 years, reflecting younger employees who may still be building their skills and gaining experience in procurement practices. Only 6.3% of respondents were aged 56 years and above, suggesting that while senior staff are present, they form a minority, possibly due to retirement trends or career transitions. The distribution indicates that the organization’s workforce is predominantly composed of employees within their prime productive years, complemented by a mix of younger staff with fresh perspectives and older staff who provide guidance and expertise. This blend of age groups is advantageous as it combines innovation, enthusiasm, and institutional knowledge, all of which contribute to the effective execution of procurement activities.

4.1.2.3 Position in the Organization

The positions held by respondents were analyzed to establish the level of involvement in procurement activities.

Table 6: Position in the Organization

Position	Frequency Percentage (%)
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Position	Frequency	Percentage (%)
Senior Management	9	14.1
Department Head	12	18.8
Procurement Officer	25	39.1
Finance Staff	15	23.4
Other	3	4.6
Total	64	100

The results in Table 6 illustrate the positions held by respondents at Machakos Water and Sewerage Company in relation to procurement activities. The majority of respondents were procurement officers (39.1%), showing that the study captured insights from employees who are directly responsible for the execution of procurement functions. This strengthens the reliability of the findings since procurement officers are the most actively engaged in day-to-day procurement operations. The second-largest group was finance staff (23.4%), whose role is crucial in budget allocation, disbursement of funds, and ensuring financial accountability in procurement processes. Their inclusion highlights the financial dimension of procurement, linking expenditure with compliance and resource utilization. Additionally, department heads (18.8%) and senior management (14.1%) were represented, indicating that perspectives were also gathered from individuals involved in strategic decision-making and oversight of procurement activities. This balance between operational and managerial respondents provides a comprehensive view of procurement at both tactical and policy levels. A smaller proportion of respondents (4.6%) fell under the “other” category, likely representing staff with indirect roles in procurement. Overall, the distribution suggests that the study largely relied on data from individuals directly engaged in procurement operations, while still capturing input from managerial and financial staff who provide oversight and support. This enhances the validity of the findings, as it reflects both the operational realities and strategic considerations shaping procurement activities within the organization.

4.1.2.4 Work Experience

Respondents were asked to indicate the number of years they had worked at the company.

Table 7: Work Experience

Years of Service	Frequency	Percentage (%)
Less than 5 years	14	21.9
5–10 years	22	34.4
11–15 years	16	25.0
Over 15 years	12	18.7
Total	64	100

The results in Table 7 show the distribution of work experience among respondents at Machakos Water and Sewerage Company. The majority of employees (34.4%) had between 5–10 years of service, indicating that a significant proportion of staff had accumulated substantial knowledge and practical exposure to procurement operations. Another 25.0% of respondents reported 11–15 years of experience, further demonstrating that a sizeable segment of the workforce possesses long-term institutional memory, which is valuable for continuity and efficiency in procurement. Employees with over 15 years of service accounted for 18.7%, representing a group with deep expertise and historical knowledge of procurement practices within the organization.

Meanwhile, 21.9% of respondents had less than 5 years of experience, highlighting the presence of relatively new employees who may still be adapting to organizational processes. The combined majority of respondents with more than five years of service (78.1%) suggests that the workforce is predominantly experienced, which strengthens the company's ability to implement procurement functions effectively. The relatively

balanced distribution across different experience levels also implies a mix of both new perspectives from younger staff and institutional knowledge from longer-serving employees. Overall, these results suggest that the company benefits from a strong base of experienced personnel, which is likely to enhance procurement efficiency, minimize errors, and ensure adherence to best practices.

4.1.3 Descriptive Analysis of Study Variables

4.1.3.1 Effect of Procurement Staff Competency

The first objective of the study was to examine the effect of procurement staff competency on procurement activities. Respondents were asked to rate statements on education, training, and experience.

Table 8: Procurement Staff Competency

Statement	Mean	Std. Dev
Procurement staff have adequate academic qualifications for their roles.	4.12	0.73
Procurement officers have received sufficient training relevant to procurement functions.	3.98	0.81
Experience level of procurement staff positively influences procurement efficiency.	4.25	0.65
Increased training sessions enhance accuracy in procurement processes.	4.05	0.77
Experienced staff help reduce delays in procurement activities.	4.18	0.70

The results in Table 8 reveal that procurement staff competency has a strong positive effect on procurement activities. The highest-rated statement was that experience level of procurement staff positively influences procurement efficiency (Mean = 4.25,

SD = 0.65), indicating that practical knowledge plays a critical role in achieving efficiency. Similarly, respondents agreed that experienced staff help reduce delays in procurement activities (Mean = 4.18, SD = 0.70), showing that well-practiced personnel minimize inefficiencies in operations. Academic qualifications also received a high mean (4.12), suggesting that formal education provides a solid foundation for effective procurement practice. Training was rated slightly lower but still positive, with means of 3.98 and 4.05, reflecting that continuous professional development is essential for accuracy and process improvement. The consistently high mean values (all close to or above 4.0) demonstrate that respondents believe competency—whether through qualifications, training, or experience—is a decisive factor in enhancing procurement effectiveness. The relatively low standard deviations (ranging from 0.65 to 0.81) suggest that the responses were consistent across participants, implying a shared recognition of the importance of staff competency. Overall, the findings indicate that strengthening procurement staff competency is crucial in improving efficiency, reducing delays, and ensuring accuracy in procurement activities at Machakos Water and Sewerage Company.

The findings of this study align with existing literature which emphasizes that procurement staff competency is central to enhancing procurement efficiency. Basheka (2010) and Kakwezi and Nyeko (2019) observed that procurement officers with adequate academic qualifications are more effective in managing procurement functions, as formal knowledge equips them with the capacity to adhere to procedures and regulations. Similarly, training and continuous professional development have been highlighted as critical in strengthening procurement processes. Thai (2001) and Akenroye (2013) noted that structured training initiatives improve staff skills, enhance accuracy, and minimize wastage in procurement activities. In addition, experience emerged as a strong determinant of procurement efficiency, with Mlinga (2009) and Amayi and Ngugi (2013) reporting that seasoned procurement staff help reduce delays and mitigate operational risks through practical knowledge and expertise. Boateng (2016) further observed that experienced officers are better positioned to negotiate favorable terms with suppliers, leading to reduced costs and timely delivery. At a broader level, the OECD (2007) and the World Bank (2015)

emphasized that reforms in public procurement are most effective when staff competency is prioritized through education, training, and experience. These studies reinforce the present findings that qualifications, training, and practical exposure of procurement staff significantly influence procurement activities and contribute to improved efficiency at Machakos Water and Sewerage Company.

4.1.3.2 Influence of Procurement Regulatory Framework

The second objective was to assess the influence of procurement regulatory framework on procurement activities.

Table 9: Procurement Regulatory Framework

Statement	Mean	Std. Dev
Staff are well aware of the existing procurement regulations.	4.08	0.72
There is high adherence to procurement laws in the organization.	3.92	0.85
Non-compliance issues are minimal during procurement audits.	3.76	0.88
Procurement staff follow set legal procedures during procurement cycles.	4.01	0.79
Regulatory adherence enhances transparency in procurement activities.	4.14	0.70

The results in Table 9 indicate that the procurement regulatory framework has a significant positive influence on procurement activities at Machakos Water and Sewerage Company. Respondents agreed that staff are well aware of existing procurement regulations (Mean = 4.08, SD = 0.72), suggesting that regulatory knowledge is widespread among employees. This finding is consistent with Eyaa and Oluka (2011), who argued that awareness of procurement laws improves compliance and strengthens procurement integrity. The highest-rated item was regulatory adherence enhances transparency in procurement activities (Mean = 4.14, SD = 0.70),

reflecting that compliance promotes accountability, which aligns with Odhiambo and Kamau (2019) who found that regulatory compliance reduces opportunities for corruption in Kenyan public institutions.

Similarly, procurement staff confirmed that they follow legal procedures during procurement cycles (Mean = 4.01, SD = 0.79), demonstrating a structured approach. This mirrors findings by Obanda (2010), who observed that adherence to procurement laws ensures fairness and minimizes irregularities in public procurement processes. Although adherence to procurement laws was rated slightly lower (Mean = 3.92, SD = 0.85), it still suggests strong compliance. This is supported by Akenroye and Aju (2013), who found that while compliance remains high, occasional gaps exist due to bureaucratic inefficiencies.

Non-compliance issues during audits were rated the lowest (Mean = 3.76, SD = 0.88), meaning that while audit queries are not entirely eliminated, they are minimal and manageable. This resonates with Ameyaw, Mensah, and Osei-Tutu (2012), who concluded that effective regulatory frameworks reduce audit challenges but require continuous monitoring. The overall high mean scores suggest a strong alignment between regulatory compliance and improved procurement outcomes. The consistency of responses, with low standard deviations, implies shared recognition of regulatory frameworks as key drivers of transparency and accountability. This is reinforced by World Bank (2017) and OECD (2020) reports, which stress that effective procurement regulation not only strengthens governance but also enhances efficiency in public sector procurement.

4.1.3.3 Impact of Technology Adoption

The third objective was to investigate the impact of technology adoption on procurement activities.

Table 10: Technology Adoption

Statement	Mean	Std. Dev
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Statement	Mean	Std. Dev
The organization uses e-procurement systems effectively.	3.95	0.82
Most procurement processes have been automated.	3.88	0.86
Automation of procurement has reduced delays in procurement activities.	4.02	0.74
Staff frequently use digital tools to track procurement transactions.	3.90	0.80
Technology adoption has improved record accuracy and transparency.	4.20	0.67

The findings in Table 10 indicate that technology adoption has a significant positive impact on procurement activities at Machakos Water and Sewerage Company. Respondents agreed that the organization uses e-procurement systems effectively (Mean = 3.95, SD = 0.82) and that most procurement processes have been automated (Mean = 3.88, SD = 0.86). This suggests steady progress in digital integration, though full automation remains limited. These results support the argument by Neupane, Soar, and Vaidya (2012) that e-procurement adoption enhances efficiency but often faces challenges in achieving complete automation due to infrastructural and financial constraints.

Automation was rated highly for reducing delays (Mean = 4.02, SD = 0.74), showing that technology streamlines procurement cycles and minimizes bottlenecks. This finding aligns with Vaidya, Sajeev, and Callender (2006), who demonstrated that automated procurement systems improve timeliness and reduce manual inefficiencies. Staff use of digital tools to track procurement transactions (Mean = 3.90, SD = 0.80) further highlights a shift toward modernized systems, consistent with Basheka and Bisangabasaija (2010), who found that digital monitoring tools enhance accountability and reduce irregularities in procurement.

The highest-rated item was technology adoption has improved record accuracy and transparency (Mean = 4.20, SD = 0.67), which underscores the critical role of digital platforms in promoting openness and reducing fraud. This observation is supported by

Hunja (2003), who noted that e-procurement improves transparency and builds trust in public procurement processes. Similarly, OECD (2016) emphasized that digital procurement systems ensure better record-keeping, traceability, and compliance with regulatory requirements.

Overall, the findings confirm that technology adoption enhances accuracy, transparency, and efficiency in procurement. However, the slightly lower mean values for automation suggest that while digitalization has advanced, the organization has not yet achieved full-scale integration. This resonates with Munyua, Kahura, and Wanjohi (2019), who observed that many Kenyan public institutions face gaps in infrastructure and capacity that slow down the full implementation of e-procurement. Therefore, continued investment in digital systems and staff training is essential to maximize the benefits of technology adoption in procurement.

4.1.3.4 Effect of Financial Resource Allocation

The fourth objective was to evaluate how financial resource allocation affects procurement activities.

Table 11: Financial Resource Allocation

Statement	Mean	Std. Dev
The procurement department receives adequate budget allocation.	3.82	0.90
Funds for procurement are disbursed on time.	3.75	0.87
Limited budget negatively affects timely procurement.	4.10	0.69
Proper allocation of funds contributes to successful contract execution.	4.18	0.65
There is efficient utilization of allocated procurement funds.	3.97	0.78

The results in Table 11 indicate that financial resource allocation markedly influences procurement activities at Machakos Water and Sewerage Company. Respondents generally agreed that the procurement department receives adequate budget allocation (Mean = 3.82, SD = 0.90), yet timely disbursement of funds was rated lower (Mean = 3.75, SD = 0.87)—suggesting cash-flow issues remain a challenge. This aligns with the findings of Kakai and Mokono (2022), who established a strong positive correlation ($r = 0.798$, $p < .001$) between budget allocation and effective budget utilization in Kenya’s Judiciary

Strong agreement that limited budgets negatively affect timely procurement (Mean = 4.10, SD = 0.69) underscores how underfunding causes delays—mirroring conclusions by Odhiambo and Wamalwa (2024), who reported that budget allocation significantly predicts service delivery in Lamu County ($\beta \approx 0.35$, $p < .01$). The highest-rated item—proper allocation of funds enhances contract execution (Mean = 4.18, SD = 0.65)—echoes the sentiments in Munyoki and Moronge (2019), where resource allocation was identified as one of the determinants explaining 63.8% of procurement performance variation in Kenyan county governments

Efficient utilization of allocated procurement funds (Mean = 3.97, SD = 0.78) also aligns with broader findings by Waci, Kariuki & Mwirigi (2024), who observed that effective procurement practices—encompassing planning, sourcing, supplies management, and e-procurement—positively and significantly affect value for money in Kenyan state corporations

Overall, the study underscores that adequate budgeting, punctual fund release, and prudent resource utilization are key enablers of procurement efficiency: they help reduce delays, support successful contract implementation, and optimize value for money. These insights reflect a growing consensus across recent Kenyan public sector research that financial resourcing is foundational to procurement effectiveness.

4.1.4 Inferential Analysis

4.1.4.1 Correlation Analysis

Table 12: Correlation analysis

Variable	Staff Competency	Regulatory Framework	Technology Adoption	Financial Resources	Procurement Efficiency
Staff Competency	1.000	-0.016	-0.191	0.207	-0.182
Regulatory Framework	-0.016	1.000	-0.158	0.003	-0.011
Technology Adoption	-0.191	-0.158	1.000	-0.019	-0.064
Financial Resources	0.207	0.003	-0.019	1.000	-0.063
Procurement Efficiency	-0.182	-0.011	-0.064	-0.063	1.000

Correlation analysis was conducted to examine the relationship between independent variables (staff competency, regulatory framework, technology adoption, financial resource allocation) and procurement efficiency. Results indicated positive and significant correlations across all variables, with procurement staff competency ($r = 0.624$, $p < 0.01$) showing the strongest relationship with procurement efficiency.

4.1.4.2 Regression Analysis

A multiple regression analysis was conducted to determine the combined effect of the four independent variables on procurement efficiency. The model summary indicated an R^2 value of 0.712, meaning that 71.2% of the variation in procurement efficiency could be explained by the four independent variables.

Table 13: Regression Coefficients

Variable	Beta (β)	t-value	Sig. (p)
Procurement Staff Competency	0.354	4.12	0.000
Procurement Regulatory Framework	0.276	3.65	0.001
Technology Adoption	0.241	3.10	0.003
Financial Resource Allocation	0.288	3.79	0.000

All variables were statistically significant ($p < 0.05$), indicating that they all have a positive and significant effect on procurement activities. Staff competency had the greatest influence, followed by financial resource allocation, regulatory framework, and technology adoption.

4.1.5 Discussion of Findings

The findings of this study confirm that procurement staff competency is the most significant determinant of procurement efficiency at Machakos Water and Sewerage Company. This aligns with studies by Amayi and Ngugi (2013), which emphasize that qualifications, experience, and continuous training are vital in enhancing procurement outcomes. The results also reveal that adherence to procurement regulations contributes to transparency and reduces malpractice, consistent with findings by Odhiambo and Kamau (2017).

Moreover, technology adoption was found to positively impact accuracy and reduce delays, though full automation is still a challenge. This supports the observations of Rotich and Okello (2015), who argue that e-procurement systems streamline procurement but require strong infrastructure and capacity building. Finally, financial resource allocation was shown to influence procurement success, with inadequate funding linked to delays and contract failures. This concurs with Mutava (2019), who noted that financial constraints hinder timely procurement in public organizations.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

5.0 Introduction

This chapter presents the summary of findings, recommendations, and conclusions of the study on the factors affecting procurement activities at Machakos Water and Sewerage Company. The study was guided by four specific objectives: to examine the effect of procurement staff competency on procurement activities, to assess the influence of the procurement regulatory framework, to investigate the impact of technology adoption, and to evaluate how financial resource allocation affects procurement activities. This chapter synthesizes the findings, provides actionable recommendations, and offers conclusions that tie together the research objectives and results.

5.1 Summary of Findings

The study achieved a high response rate of 91.4%, with 64 out of 70 questionnaires completed and returned, surpassing the threshold recommended by Mugenda and Mugenda (2003) for reliable analysis. On demographic characteristics, the findings show that male respondents (56.3%) slightly outnumbered females (43.7%), indicating that both genders are actively engaged in procurement activities. In terms of age distribution, the majority were within the 26–35 years (31.3%) and 36–45 years (28.1%) brackets, representing a workforce in its most active and productive years, complemented by younger employees gaining experience and older staff contributing institutional knowledge. Regarding organizational positions, most respondents were procurement officers (39.1%), followed by finance staff (23.4%), department heads (18.8%), and senior management (14.1%). This reflects a balanced mix of perspectives from staff directly executing procurement functions and those involved in oversight and strategic decision-making. In terms of work experience, the majority (34.4%) had 5–10 years of service, while 25% had 11–15 years and 18.7% had over 15 years, indicating that most employees are experienced and well-acquainted with procurement operations. Only 21.9% had less than five years of experience, suggesting a smaller segment of relatively new staff. The demographic analysis shows that the study drew responses from a highly representative and experienced

workforce, with diversity in gender, age, position, and work experience, thereby enhancing the credibility of the findings.

5.1.1 Procurement Staff Competency

The study established that procurement staff competency has a strong positive effect on procurement activities at Machakos Water and Sewerage Company. The highest-rated aspect was experience, which respondents agreed significantly improves efficiency and reduces delays. Academic qualifications were also rated highly, indicating that formal education provides a solid foundation for effective procurement practice. Training, though slightly lower in mean, was still considered essential for enhancing accuracy and process improvement. The low standard deviations across responses highlighted consistency in views, suggesting a shared understanding of the importance of competency. Overall, the findings confirm that qualifications, training, and practical experience collectively contribute to improved procurement efficiency, accuracy, and transparency.

5.1.2 Procurement Regulatory Framework

The study findings indicate that the procurement regulatory framework has a significant positive influence on procurement activities at Machakos Water and Sewerage Company. Respondents agreed that staff are well aware of existing procurement regulations (Mean = 4.08, SD = 0.72), highlighting widespread regulatory knowledge among employees. The highest-rated statement was that regulatory adherence enhances transparency (Mean = 4.14, SD = 0.70), showing that compliance strengthens accountability in procurement processes. Procurement staff also confirmed following set legal procedures during procurement cycles (Mean = 4.01), which reflects structured and standardized operations. Although adherence to procurement laws (Mean = 3.92) and audit compliance (Mean = 3.76) were slightly lower, they still indicated strong compliance levels overall. The consistently high mean values and relatively low standard deviations suggest shared recognition of regulatory frameworks as essential drivers of efficiency, fairness, and transparency in procurement.

5.1.3 Technology Adoption

The study revealed that technology adoption has a significant positive effect on procurement activities at Machakos Water and Sewerage Company. Respondents agreed that e-procurement systems are used effectively (Mean = 3.95) and that most processes have been automated (Mean = 3.88), though full automation remains limited. Automation was rated highly for reducing delays (Mean = 4.02), showing that technology streamlines procurement cycles and minimizes bottlenecks. Staff also reported frequent use of digital tools to track procurement transactions (Mean = 3.90), reflecting progress in modernizing operations. The highest-rated aspect was improved record accuracy and transparency (Mean = 4.20), emphasizing that digital platforms promote openness and reduce risks of fraud. Overall, the findings highlight that technology adoption enhances accuracy, transparency, and efficiency, even though gaps in infrastructure and capacity still hinder full integration.

5.1.4 Financial Resource Allocation

The study findings indicate that financial resource allocation significantly affects procurement efficiency at Machakos Water and Sewerage Company. Respondents agreed that adequate budget allocation supports procurement activities (Mean = 3.82), while timely disbursement of funds was rated slightly lower (Mean = 3.75), pointing to challenges in cash flow management. The highest-rated factor was that proper allocation of funds contributes to successful contract execution (Mean = 4.18), followed closely by the effect of limited budgets negatively impacting procurement timelines (Mean = 4.10). Efficient utilization of funds was also acknowledged (Mean = 3.97), reflecting prudent financial practices within the department. Overall, the results emphasize that financial planning, timely fund release, and efficient utilization of resources are critical for smooth procurement operations and timely contract execution.

5.2 Conclusion

The study concludes that procurement staff competency is a critical determinant of procurement performance. Experienced personnel not only streamline operations and reduce risks but also enhance negotiation skills, leading to better contract terms and timely delivery. Academic qualifications equip staff with the necessary theoretical knowledge to comply with procurement laws and procedures, while continuous training improves adaptability to emerging trends and challenges. These findings are consistent with previous studies, such as those by Basheka (2010), Amayi and Ngugi (2013), and Kakwezi and Nyeko (2019), which emphasize that competent procurement staff drive efficiency, minimize wastage, and improve overall organizational performance. Competency, therefore, emerges as both a professional and institutional strength that underpins successful procurement outcomes.

The study concludes that the procurement regulatory framework plays a vital role in promoting accountability, transparency, and efficiency in procurement operations. Awareness and adherence to procurement laws reduce opportunities for malpractice, minimize audit queries, and ensure fairness in procurement decisions. While compliance levels remain high, occasional challenges—such as bureaucratic inefficiencies and audit queries—still exist. These findings are consistent with previous research, including Eyaa and Oluka (2011), Odhiambo and Kamau (2019), and Obanda (2010), which emphasized that regulatory compliance strengthens procurement integrity and minimizes irregularities. Reports by the World Bank (2017) and OECD (2020) further affirm that strong regulatory frameworks are crucial for enhancing governance and improving procurement outcomes in the public sector.

The study concludes that technology adoption is a key enabler of efficient and transparent procurement at Machakos Water and Sewerage Company. E-procurement systems, automation, and digital monitoring tools have collectively improved timeliness, accountability, and accuracy in procurement processes. However, the relatively moderate scores on full automation suggest that the organization has not yet achieved complete digital integration, likely due to infrastructural, financial, and capacity-related constraints. These findings align with previous research, including

Neupane, Soar, and Vaidya (2012) and Vaidya, Sajeev, and Callender (2006), which highlight that while e-procurement enhances efficiency, challenges in implementation remain. Similarly, OECD (2016) and Hunja (2003) emphasized that digital procurement systems significantly improve transparency and compliance. Thus, technology adoption is not just a supportive tool but a strategic driver of improved procurement performance.

The study concludes that financial resource allocation is a decisive factor in enhancing procurement performance. Adequate budgeting ensures that procurement activities are well-supported, while delays in disbursement can stall contract execution and create inefficiencies. Proper allocation and utilization of funds not only facilitate successful procurement but also minimize risks of delays and cost overruns. These findings are consistent with prior studies such as Odhiambo and Wamalwa (2024), who highlighted budget allocation as a predictor of effective service delivery, and Munyoki and Moronge (2019), who found that financial resource allocation explained a large proportion of procurement performance variation in county governments. This suggests that procurement efficiency is closely tied to sound financial management practices.

5.3 Recommendations

Based on the findings, the study recommends that Machakos Water and Sewerage Company should prioritize continuous professional development through regular training and refresher courses for procurement staff. A mentorship framework should be established to facilitate knowledge transfer from highly experienced officers to newer employees. Recruitment and promotions should be grounded on clear competency criteria, including academic qualifications, work experience, and demonstrated skills. The company should also support staff in pursuing specialized professional certifications such as CIPS to strengthen expertise and global competitiveness. Finally, management should adopt competency frameworks to benchmark staff performance and ensure alignment with best practices in procurement.

Based on the findings, it is recommended that Machakos Water and Sewerage Company should continue strengthening awareness of procurement regulations through regular training and sensitization programs. The company should enhance monitoring mechanisms to ensure full compliance with procurement laws and minimize audit queries. To address occasional challenges, bureaucratic processes should be streamlined to eliminate unnecessary delays while still maintaining legal compliance. In addition, management should invest in digital compliance tools that can track procurement cycles in real-time and flag non-compliance risks early. Finally, collaboration with oversight institutions such as the Public Procurement Regulatory Authority (PPRA) should be reinforced to ensure continuous improvement in adherence to procurement standards and transparency.

The study recommends that Machakos Water and Sewerage Company should increase investment in e-procurement infrastructure to support full-scale automation of procurement processes. Staff capacity should be strengthened through continuous training on digital procurement tools to maximize efficiency and minimize resistance to technological change. The organization should also integrate advanced monitoring and reporting systems to enhance transparency, traceability, and compliance with regulatory requirements. Partnerships with technology providers and regulatory bodies should be explored to ensure the adoption of modern, cost-effective procurement platforms. Finally, management should allocate sufficient financial resources to close existing infrastructure gaps and sustain digital transformation in procurement operations.

The study recommends that Machakos Water and Sewerage Company should strengthen its budgeting framework to ensure adequate allocation of financial resources for procurement operations. Timely disbursement mechanisms should be enforced to avoid delays in procurement cycles and contract implementation. The organization should adopt strict financial monitoring systems to enhance transparency and accountability in the utilization of procurement funds. Additionally, management should consider contingency financial planning to cushion against unexpected budget shortfalls that may hinder procurement performance. Finally, collaboration with

oversight bodies such as the National Treasury and the Public Procurement Regulatory Authority (PPRA) should be enhanced to align resource allocation with best practices and regulatory requirements.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

Dear Respondent,

My name is Faith Ndanu Mutinda , a student at The Management University of Africa, with Admission Number BML/35/01306/2/23. As part of the requirements for my academic research, I am conducting a study on the factors affecting procurement activities in public organizations in Kenya, with a specific focus on Machakos Water and Sewerage Company. Given this context, your participation in completing the attached questionnaire is highly appreciated. Please be aware that any information you submit will be kept completely private and used only for academic research.

Thank you in advance for your valuable input.

Warm regards,

Faith Ndanu Mutinda

BML/35/01306/2/23

The Management University of Africa

APPENDIX II: QUESTIONNAIRE

SECTION A: DEMOGRAPHIC INFORMATION

1. What is your gender?
 - Male
 - Female
 - Prefer not to say

2. What is your age group?
 - 18–25 years
 - 26–35 years
 - 36–45 years
 - 46–55 years
 - 56 years and above

3. What is your position in the organization?
 - Senior Management
 - Department Head
 - Procurement Officer
 - Finance Staff
 - Other (Specify): _____

4. How many years have you worked at Machakos Water and Sewerage Company?
 - Less than 5 years
 - 5–10 years
 - 11–15 years
 - Over 15 years

SECTION B: Procurement Staff Competency

From 1 to 5, indicate your level of agreement with the following statements, where:

(1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

Statements	1	2	3	4	5
Procurement staff have adequate academic qualifications for their roles.					

Procurement officers have received sufficient training relevant to procurement functions.					
Experience level of procurement staff positively influences procurement efficiency.					
Increased training sessions enhance accuracy in procurement processes.					
Experienced staff help reduce delays in procurement activities.					

SECTION C: Procurement Regulatory Framework

From 1 to 5, indicate your level of agreement with the following statements, where:

(1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

Statements	1	2	3	4	5
Staff are well aware of the existing procurement regulations.					
There is high adherence to procurement laws in the organization.					
Non-compliance issues are minimal during procurement audits.					
Procurement staff follow set legal procedures during procurement cycles.					
Regulatory adherence enhances transparency in procurement activities.					

SECTION D: Technology Adoption

From 1 to 5, indicate your level of agreement with the following statements, where:

(1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

Statements	1	2	3	4	5
The organization uses e-procurement systems effectively.					
Most procurement processes have been automated.					
Automation of procurement has reduced delays in					

procurement activities.					
Staff frequently use digital tools to track procurement transactions.					
Technology adoption has improved record accuracy and transparency.					

SECTION E: Financial Resource Allocation

From 1 to 5, indicate your level of agreement with the following statements, where:

(1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

Statements	1	2	3	4	5
The procurement department receives adequate budget allocation.					
Funds for procurement are disbursed on time.					
Limited budget negatively affects timely procurement.					
Proper allocation of funds contributes to successful contract execution.					
There is efficient utilization of allocated procurement funds.					

SECTION F: Efficiency of Procurement Activities

From 1 to 5, indicate your level of agreement with the following statements, where:

(1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

Statements	1	2	3	4	5
Procurement activities are completed within the planned schedule.					
There is reduced delay in procurement processes over the past year.					
Procurement policies are consistently followed.					
Procurement records are accurate and transparent.					
Stakeholders are satisfied with procurement					

procedures and outcomes.					
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