

**PUBLIC PROCUREMENT MANAGEMENT PRACTICES AND PUBLIC PROCUREMENT  
PRICE VARIANCE IN GOVERNMENT AGENCIES IN NAIROBI, KENYA.**

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MOUNT KENYA UNIVERSITY**

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## DECLARATION AND APPROVAL

This project is my original work and has not been presented for a degree or any other award in any other University.

Signed



Date 24<sup>TH</sup> JUNE 2025

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### Approval

This project is being submitted with my approval as the University supervisor.

Signed



Date: 24<sup>TH</sup> JUNE 2025

Dr Kamoni Peter,  
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## DEDICATION

I dedicate this research to my family for their wonderful, unwavering and unending support.



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## ABSTRACT

In developing nations where the urgent need for infrastructure and essential services has been historically neglected, public procurement often accounts for an average of around 30% of GDP highlighting the considerable reliance on public procurement to drive economic growth and improve public services in these regions. However, the large scale of public procurement makes it vulnerable to inefficiencies and corruption. Addressing these vulnerabilities is essential to ensure that public procurement can fulfill its critical role in driving national development. However, despite the pressing need for efficiency, public procurement processes in Kenya have been plagued by an inefficiency that manifests in the form of overpriced tendering processes, raising serious concerns about the integrity of public spending. Very few studies have examined the concept of public procurement overpricing in Kenya, and mechanisms to alleviate it. This study sought to examine the effect of: Procurement Planning; Procurement Audit; E-Supply Chain Management; and Procurement Risk Management; on Public Procurement Price Variance. The study collected data from 73 government agencies in Nairobi; and applied regression analysis to examine the statistical significance of the variables of study on Public Procurement Price Variance. The study established that public procurement management practices. However, the study also found gaps in procurement planning, lack of a concrete procurement audit framework, relatively low application of digitization, and relatively high usage of non-competitive methods of procurement. The study thus recommends for policy and research intervention into these public procurement practices- specifically, the perceived resistance to apply them.



Mount Kenya

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

E-SCM:        Electronic Supply Chain Management

GDP: Gross Domestic Product

MDAs: Ministries Departments and Agencies

OECD: Organization for Economic Cooperation and Development

PPRA: Public Procurement Regulatory Authority

UTAUT: Unified Technology Acceptance and Usage Theory

VFM: Value for Money Framework



# CHAPTER ONE

## INTRODUCTION AND BACKGROUND OF THE STUDY

### 1.0 Introduction

This chapter provides a contextual introduction to the concept of public procurement price variance and discussion of public procurement practices that could influence the level of public procurement price variance. The section outlines the problem of the study as well as the objectives of the study.

### 1.1 Background of the Study

Public procurement is a fundamental aspect of national development that cannot be overlooked. Its significance arises not only from its substantial financial footprint but also due to its overarching goals. In countries that are part of the Organization for Economic Co-operation and Development (OECD), public procurement typically represents about 12% of the nation's Gross Domestic Product (GDP) (OECD, 2021). In some of these nations, this figure can escalate to as much as 22% of the GDP, reflecting the critical role that public procurement plays in their economies. However, the impact of public procurement is even more pronounced in developing nations, where the urgent need for infrastructure and essential services has been historically neglected. In these countries, public procurement often accounts for an average of around 30% of GDP. For example, it averages 28% in Botswana and 26% in Kenya, highlighting the considerable reliance on public procurement to drive economic growth and improve public services in these regions (Bosio & Djankov, 2020).

Given the vast sums of money involved, public procurement emerges as a major component of public spending on a global scale. Governments seek to utilize these funds to provide necessary services and build vital infrastructure for their citizens. However, the large scale of public procurement also makes it vulnerable to inefficiencies and corruption. Issues such as collusion for price fixing, the formation of cartels, delayed payments, failure to deliver goods and services, duplicate payments, and inflated costs for procurement contracts are prevalent challenges that often undermine the intended benefits of public procurement systems (Fazekas, Sberna, & Vannucci, 2022). These problems not only hinder effective development but also erode public trust in government institutions and their capacity to manage resources effectively. As a result, addressing these vulnerabilities is essential to ensure that public procurement can fulfill its critical role in driving national development. Given the size, and impact, any effort to mitigate these vices that result in loss of colossal amounts public funds could have huge impact in the economies of the nations of the world.

For instance, Kenya, just like other developing nations, is experiencing significant pressure to develop, yet it is constrained by decreasing financial resources needed to support this growth. As highlighted by Yohou (2023), Kenya, like many other developing nations, is burdened with substantial debt repayment obligations. This financial strain is compounded by stagnant national revenues, which limits the government's ability to invest in essential development projects. As a result, the fiscal space available for public spending shrinks, making it increasingly difficult to fund infrastructure, education, health care, and other vital sectors that are necessary for the nation's progress. This situation underscores the urgent need for improved efficiency in the management of public resources. According to Nandelenga (2021), effective resource management is not just desirable but essential for maximizing the impact of limited funds available for development.

However, despite the pressing need for efficiency, public procurement processes in Kenya have been plagued by instances of fraud. Reports indicate that these challenges often manifest in the form of overpriced tendering processes, raising serious concerns about the integrity of public spending. Kamoni et al. (2024) estimate that in various public procuring entities, the prices of goods and services can be inflated by as much as 220% above market rates. Such excessive overpricing represents a significant loss of public funds, which would otherwise be redirected toward development initiatives. Furthermore, this misuse of resources exacerbates the country's borrowing pressures, making it even harder for Kenya to achieve its development goals. Addressing these issues is critical for unlocking the potential for growth and advancement in the nation, as the funds lost to procurement fraud could have been utilized effectively in areas that drive sustainable development and economic stability.

Numerous instances of public procurement overpricing have come to light, raising significant concerns regarding the integrity of government contracts. One notable example is reported by Mukinda (2020), which highlights the Smart plate number plate tender. According to this report, the costs associated with this tender were inflated by an astounding 300%, indicating a severe discrepancy between the expected market price and the actual amount paid. In another striking case, Amadala (2020) reveals that in the County of Bungoma, wheelbarrows that were valued at approximately KES 5,000 in the marketplace were procured at an exorbitant rate of KES 109,000 each. This represents a staggering markup that undermines public trust in procurement practices. Additional high-profile cases further illustrate the severity of the situation. For instance, a tender for police helicopters was reported to be inflated by KES 1 billion, as noted by Mutai in 2017.

Further, the Kenya Medical Supplies Agency faced scrutiny for overpricing medical supplies, resulting in a substantial loss of KES 39 million, as documented by the Office of the Auditor General in 2020. A thorough analysis conducted by the Ethics and Anti-Corruption Commission on tenders awarded to the National Youth Service revealed a shocking price inflation of 550%. This led to a financial loss exceeding KES 37 million, as reported by KLR (2018). Despite the implementation of various mechanisms intended to prevent overpricing, the prevalence of such practices remains alarming, as outlined by Kamoni et al. (2024). To combat these issues, the Public Procurement Regulatory Authority (PPRA, 2024) reports that there is an established regulatory framework designed to foster price conformity through the use of price indices and adherence to established regulations. However, it is evident that a significant gap persists in the enforcement of these measures, as demonstrated by the ongoing and rampant occurrences of inflated pricing in government contracts. The contrast between regulatory intentions and real-world outcomes underscores the need for a more effective approach to ensuring accountability and transparency in public procurement.

### **1.1.1. Global Perspective on Public Procurement Management Practices and Price Variance.**

Bauhr, Czibik, Licht, and Fazekas (2020) highlight the persistent issue of corruption within the procurement systems of developed nations. This corruption manifests in various ways, leading to significant inefficiencies, one of the most notable being overpricing of goods and services. Such overpricing not only impacts the financial integrity of public spending but also detracts from the overall effectiveness of government operations. The authors point out that in response to these challenges, several developing nations within the European Union are actively pursuing greater transparency in their public procurement processes. By fostering transparency, these nations aim

to combat the corrupt practices that undermine the efficiency and fairness of their procurement systems. These initiative include publication of names of owners of winning bids, public engagement, and transparent digital processes (Meanar, 2024). These initiative are seen as a crucial step toward enhancing accountability and ensuring that public resources are used more effectively, ultimately benefiting both the government and its citizens.

In several countries that are part of the Organization for Economic Co-operation and Development (OECD), Reverse e-auctions have been integrated into electronic procurement systems as a strategic method to achieve significant cost reductions. The OECD (2019) report highlights that this innovative approach allows suppliers to actively participate in a competitive bidding process where they can submit lower prices than their initial offers. This mechanism not only fosters a competitive environment but also encourages suppliers to improve their pricing in real-time, ultimately leading to substantial price savings for the purchasing entities. The effectiveness of reverse e-auctions in facilitating lower procurement costs has made them a valuable tool within the e-procurement landscape in these countries. In the United States, various factors contribute to the ongoing evolution of public procurement processes. One significant development is the increasing emphasis on digitization, which streamlines operations and improves efficiency in how agencies handle purchasing. Alongside this advancement, compliance with regulatory initiatives has become crucial for ensuring that procurement practices meet legal and ethical standards (Fazekas & Blum, 2021).

In addition to these trends, a new contract type has emerged that is reshaping the landscape of public procurement. This type is characterized by a lead contracting agency that creates a purchase agreement and subsequently allows other states to join or participate in that agreement (Plotnick

and Peirce, 2021). This arrangement is commonly referred to as "piggybacking" or utilizing participating addendums. By enabling multiple states to take advantage of an existing contract, this approach fosters collaboration and sharing of resources among governmental entities. As a result of this collaborative framework, public procurement processes are experiencing significant cost reductions. The ability of states to piggyback on contracts negotiated by a lead agency means they can benefit from bulk purchasing power and obtain goods or services at lower prices than they might achieve independently (Baldus and Hatton, 2020). This not only enhances fiscal efficiency for individual states but also promotes a more cooperative approach to public spending across the country. The integration of these practices into the public procurement process signals a shift toward more innovative and cost-effective solutions, ultimately enhancing the overall effectiveness of governmental purchasing.

In Brazil, Martinez-Carrasco, Conceição, and Dezolt (2023) highlight the significant impact that access to current market prices has on the purchasing behavior of procurement officers. This access enables these officials to make more informed decisions when acquiring goods and services. The findings show that when procurement officers are armed with up-to-date pricing information, there is a notable decrease in unit purchasing costs for public entities; especially in non-competitive contexts, where the initial or ex-ante unit prices are typically higher or a smaller pool of suppliers available to meet the demand and a limited number of public institutions engaging in the procurement. Under these conditions, the availability of accurate market price data empowers procurement officers to negotiate better deals and make purchasing decisions that ultimately lead to lowered costs for the government and taxpayers alike. In China, the procurement process includes a distinctive step known as the selection of public procurement specialists, which plays a crucial role in minimizing issues of corruption and collusion during procurement activities. This

system not only enhances transparency but also contributes to securing more favorable pricing for public contracts. According to Wang, Zhang, and Liu (2020), public entities maintain a comprehensive database of procurement specialists.

When it comes time to evaluate bids, these entities randomly select individuals from this database to form an evaluation committee. This random selection helps ensure that the process remains impartial and reduces the likelihood of biased decisions that could lead to unfair advantages. The evaluation committee is responsible for reviewing the bids submitted by various contractors or suppliers. Their evaluations are based on established criteria relevant to the specific procurement, whether it involves quality, cost, or delivery timelines. Once the committee completes their assessments, they compile a report detailing their findings and recommendations regarding which bid should be awarded the contract (Wang, Zhang, Liu, 2020). This report is critical, as it serves as the basis for the final decision on which bidder will secure the contract. Overall, this systematic approach to selecting procurement specialists fundamentally enhances the integrity of the public procurement process in China, fostering an environment that prioritizes fairness and value for public funds.

The practices highlighted across various countries demonstrate a concerted effort to address the systemic issue of overpricing in public procurement—a key indicator of inefficiency and potential corruption. In developed nations, as Bauhr et al. (2020) note, overpricing is often symptomatic of opaque procurement systems vulnerable to manipulation. However, initiatives such as transparent digital processes and the publication of ownership details of winning bidders in EU nations (Meanar, 2024) directly target this issue by increasing public scrutiny and reducing opportunities for inflated pricing. Similarly, reverse e-auctions adopted in OECD countries (OECD, 2019)

introduce dynamic competition among suppliers, which inherently drives prices down and curtails the likelihood of overpricing. In the U.S., digitization and inter-state contract "piggybacking" arrangements (Plotnick & Peirce, 2021; Baldus & Hatton, 2020) leverage economies of scale and collaborative negotiation power to reduce costs, minimizing the room for excessive pricing. Brazil's focus on real-time market price data (Martinez-Carrasco et al., 2023) equips procurement officers with actionable intelligence to resist overpriced bids, particularly in non-competitive environments. Meanwhile, China's randomized selection of procurement specialists (Wang, Zhang & Liu, 2020) disrupts entrenched networks that could facilitate collusion, ensuring bid evaluations are based on merit and value.

### **1.1.2 Regional Perspective on Public Procurement Management Practices and Price Variance**

Mokoena (2020) highlights a significant issue in South Africa related to public procurement processes, indicating that there is a tendency for overpricing of goods and services. This situation serves as a clear indication of possible non-compliance with established regulations and can be a sign of fraudulent activities occurring within the system. Furthermore, Mathiba (2020) suggests that such overpricing issues are particularly acute in situations of emergency procurement, where there is a noticeable gap in the legal framework governing these urgent purchasing decisions. The absence of clear and established guidelines can create an environment ripe for corruption, leading to heightened instances of inflated pricing during critical procurement periods. Both Mokoena (2020) and Mathiba (2020) emphasize the necessity of a thorough examination and reform of the regulatory framework, specifically targeting emergency procurement procedures. They argue that improving transparency throughout the procurement process is essential to mitigate the corruptive

practices that drive up costs. By implementing stronger regulations and ensuring that procurement practices are clear and accountable, it is possible to reduce instances of overpricing and enhance the integrity of public procurement in South Africa.

Lassou et al. (2024) provide a compelling analysis of the issue of overpricing in public procurement tenders, shedding light on a critical aspect of this phenomenon. According to Lassou et al (2024) the political landscape is often marred by costly practices such as vote buying and expensive election campaigns. As a result, the public procurement process can become a means for politicians to raise funds for their political activities, instead of serving its intended purpose of promoting transparency and efficiency in the allocation of public resources. This misuse is facilitated by a deliberate circumvention of legal and accounting controls, which is made possible through a persistent state capture process. The implications of this are significant, as it highlights the urgent need to separate public procurement from political influences, and to enhance its professionalism.

Similar instances of procurement overpricing have been observed in various countries, including Ethiopia, the Central African Republic, and Ghana. In these contexts, Bawole and Adjei-Bamfo (2020) argue that political dynamics play a critical role in distorting the procurement process. They emphasize that by implementing a sound regulatory framework at the institutional level, it is possible to mitigate the influence of politics in procurement. Such measures would not only improve the efficiency of the procurement process but also ensure greater accountability and integrity in how public resources are managed. This aligns with the broader goal of promoting good governance and ensuring that public procurement serves its rightful function in supporting national development initiatives. In Uganda, Abdou et al (2022) notes that corrupt practices

compound to cause inflation of prices that could be overcome by enhancing openness of the procurement process such as information portals.

The prevalence of overpricing in public procurement across various African countries, as detailed by Mokoena (2020), Mathiba (2020), Lassou et al. (2024), Bawole and Adjei-Bamfo (2020), and Abdou et al. (2022), underscores the systemic vulnerabilities that allow inflated pricing to flourish—particularly in environments marked by weak regulation, political interference, and low transparency. In South Africa, overpricing is not only linked to non-compliance with procurement laws but is exacerbated during emergency procurement where legal frameworks are insufficient, creating loopholes for fraud and inflated costs. This pattern is echoed in broader African contexts, where political motivations—such as funding for campaigns or personal enrichment—often hijack procurement systems, as Lassou et al. (2024) and Bawole & Adjei-Bamfo (2020) observe. These distortions are facilitated by poor institutional controls and the politicization of procurement decisions. In Uganda, Abdou et al. (2022) reinforces this narrative by highlighting how limited public access to procurement information contributes to price inflation.

### **1.1.3 Local Perspective on Public Procurement Management Practices and Price Variance**

Kenya's public procurement system is currently facing significant inefficiencies that are common in many developing countries. This system is plagued by political misuse and various forms of interference, which contribute to widespread corruption. As highlighted by Kamoni et al. (2024), these corrupt practices lead to general price inflation across numerous procuring entities, resulting in overpricing that is prevalent and troubling. The issue of overpricing is particularly evident in the inflated tenders that have garnered attention and been reported on extensively. In an effort to manage and control overpricing within the procurement landscape, the Public Procurement

Regulatory Authority (PPRA) has introduced mechanisms designed to provide a market price index. This initiative is outlined in the Public Procurement and Asset Disposal Act of 2015. The aim of this provision is to create a framework that helps procuring entities reference appropriate market prices, thereby reducing the tendency to inflate tender costs.

Additionally, there have been recent initiatives aimed at increasing transparency within the public procurement process. This includes efforts to publish procurement information more openly. However, according to research by Muiruri (2022), a significant 97% of public procuring entities in Kenya fail to disclose the beneficiaries of tenders on the Public Procurement Information Portal (PPIP). Such lack of transparency undermines public trust and further complicates efforts to combat corruption. Furthermore, the transition to an e-procurement system has faced resistance. Issues related to capacity and a reluctance to adopt these digital solutions hinder the establishment of an environment where e-procurement can thrive. Such an environment would not only streamline processes but also reduce collusion and corrupt practices, which are key contributors to the issue of overpricing. As a result, there remains a notable discrepancy in procurement prices, with goods often being acquired at rates above the prevailing market prices, continuing the cycle of inefficiency and financial loss within the public procurement system.

Kenya's public procurement system illustrates how institutional weaknesses, political interference, and low transparency contribute directly to overpricing, echoing trends observed in other developing nations. As Kamoni et al. (2024) emphasize, the inflation of tender prices is not isolated but systemic, driven largely by corrupt practices and political manipulation across procuring entities. While the Public Procurement and Asset Disposal Act of 2015 introduced a market price index through the PPRA to standardize costs and combat overpricing, implementation gaps remain a significant challenge. The intended benefits of such mechanisms are undermined by widespread

non-compliance and information opacity. Muiruri (2022) points out that despite legal requirements, the vast majority of procuring entities—approximately 97%—fail to disclose tender beneficiaries on the PPIP, thereby eroding accountability and enabling continued inflation of procurement costs. Moreover, resistance to e-procurement adoption, stemming from both technical capacity limitations and institutional inertia, further entrenches inefficiencies. Without fully leveraging digital tools that promote competitive bidding and reduce collusion, procurement entities continue to procure goods and services at inflated rates.

#### **1.1.4 Agencies of the Government of Kenya.**

The national Government of Kenya functions through various Ministries, Departments, and Agencies (MDAs), which are crucial for effective governance. Many of these entities are government agencies based in Nairobi, the capital city. Each Agency has a specific role that contributes to the overall functioning of the government and the well-being of the citizens. One of the primary responsibilities of the agencies is policy implementation. Once the Ministries formulate policies that guide the direction of government initiatives and programs, the Agencies, and Departments take on the important task of implementing them. This division of labor ensures that there is a clear pathway from the conception of policies to their practical application in society.

In addition to policy implementation, another vital function of the Agencies is service delivery. These entities are charged with the responsibility of providing essential services to the public. These services include healthcare, education, and infrastructure development. By focusing on service delivery, the government aims to enhance the quality of life for its citizens and meet their basic needs. Regulation and oversight represent another critical aspect of the Agencies' roles. Various agencies are tasked with enforcing regulations that govern different sectors of society.

This enforcement is essential for maintaining standards and ensuring compliance with laws. Agencies monitor activities and practices to protect citizens' rights and promote fairness in business and public services.

Lastly, many agencies also serve an advisory function. They provide specialized expertise and recommendations to the government on different sectoral issues. By doing so, they support informed decision-making that aligns with national goals and priorities. This advisory role is particularly important during the formulation of policies and strategies that affect diverse areas such as the economy, health, and education. In summary, the national government of Kenya operates through a network of Ministries, Departments, and Agencies headquartered in Nairobi. These entities work together in policy development, service delivery, regulation and oversight, and advisory functions. Their coordinated efforts are crucial for effective governance and the advancement of the nation.

## 1.2 Statement of the Problem

Public procurement is a fundamental aspect of national development that cannot be overlooked owing to its financial footprint accounting for about 12%, and up-to to 30%, of the GDP of OECD countries and developing nations respectively (OECD, 2021). The extensive financial footprint and goals of public procurement however pre-dispose it fraud and corruption (Bosio & Djankov, 2020). Issues such as collusion for price fixing, the formation of cartels, delayed payments, failure to deliver goods and services, duplicate payments, and inflated costs for procurement contracts are prevalent challenges that often undermine the intended benefits of public procurement systems (Fazekas, Sberna, & Vannucci, 2022). Therefore efforts to improve openness and accountability could portend huge savings for nations that could be used to improve fiscal performance.

In Kenya, these efforts are outlined in the Public Procurement and Asset Disposal act of 2015. However, despite these initiatives, procurement inefficiency manifesting in overpriced tender awards persist. One notable example is reported by Mukinda (2020), which highlights the Smart plate number plate tender was inflated by an astounding 300%, indicating a severe discrepancy between the expected market price and the actual amount paid. Amadala (2020) reveals that in the County of Bungoma, wheelbarrows that were valued at approximately KES 5,000 in the marketplace were procured at an exorbitant rate of KES 109,000, while a tender for police helicopters was reported to be inflated by KES 1 billion (Mutai, 2017). This misuse of resources exacerbates the country's borrowing pressures, making it even harder for Kenya to achieve its development goals.

Few studies examine this concept in Kenya. They include Kamoni et al. (2024) who sought to estimate the extent of public procurement price variance among MDAs in Kenya. Other related studies: Ochrana and Stehlik (2015), Placek et al (2019) , and Nemek, Kubak, Krapek and

Horejova (2020); have examined this issue outside the jurisdiction of this study. This study therefore seeks to examine the concept of public procurement price variance in Kenya from the perspective of public procurement management practices. Therefore this study will seek to examine the effect of public procurement management practices on public procurement price variance in the county governments of Kenya.

### **1.3 General Objective**

The general objective of this study was to examine the effect of public procurement management practices on public procurement price variance in government agencies in Nairobi, Kenya.

### **1.4 Specific Objectives**

The study was be guided by the following specific objectives:

1. To examine the effect of procurement planning on public procurement price variance in Government Agencies in Nairobi, Kenya.
2. To assess the effect of procurement audit on public procurement price variance in Government Agencies in Nairobi, Kenya.
3. To examine the effect of E-supply chain management on public procurement price variance in Government Agencies in Nairobi, Kenya.
4. To assess the effect of procurement risk management on public procurement price variance in Government Agencies in Nairobi, Kenya.

## 1.5 Research Questions

The study was guided by the following research questions:

1. What is the effect of procurement planning on public procurement price variance in Government Agencies in Nairobi, Kenya?
2. What is the effect of procurement audit on public procurement price variance in Government Agencies in Nairobi, Kenya?
3. What is the effect of E-supply chain management on public procurement price variance in Government Agencies in Nairobi, Kenya?
4. What is the effect of procurement risk management on public procurement price variance in Government Agencies in Nairobi, Kenya?

## 1.6 Scope of the Study

The study focused specifically on four independent practices within its research framework. It is important to note that while these practices are the primary focus, there are numerous other factors that could influence the differences in pricing that are observed. The research will gather information from various government agencies located in Nairobi County. This decision is based on the understanding that most of the principal offices of national entities and government bodies are situated in Nairobi, which is recognized as the capital city of the nation. By concentrating on this specific area, the study aims to ensure that the data collected is relevant and comprehensive, taking into consideration the significant roles that these institutions play in the broader economic landscape.

## 1.7 Significance of the Study

The study is poised to hold significant importance within the context of public procurement in Kenya. It aims to bring to light the various issues that contribute to the occurrence of price variance in public procurement processes, particularly those that lead to instances of overpricing. By investigating the factors that underlie these disparities, the study will provide a comprehensive analysis of the extent to which price variance manifests in different procurement scenarios. Furthermore, the research will identify and elaborate on potential mechanisms and strategies that could be implemented to mitigate the challenges associated with price variance. These mechanisms may include revised regulatory frameworks, enhanced oversight, and improved training for procurement professionals, among others. Through careful analysis and evaluation, the study will present actionable recommendations that can be adopted to strengthen the integrity and efficiency of the public procurement system.

The findings and recommendations derived from this study are expected to resonate with key stakeholders, including the National Treasury and the Public Procurement Regulatory Authority. These institutions play a vital role in ensuring the smooth and effective operation of the public procurement system in Kenya. Additionally, the insights gained from this research will be valuable for procurement managers and practitioners who are directly involved in the execution of procurement activities. Their ability to apply these recommendations will ultimately enhance the transparency and fairness of the procurement process, leading to more equitable pricing and better use of public resources.

## 1.8 Limitations of the study

The study encountered data acquisition challenges owing to the sensitive nature of the data required, particularly because public procurement involves financial transactions, contractual agreements, and potential exposure of corruption or irregularities. Data related to public procurement is often considered sensitive for several reasons. It contains commercially confidential information such as bid prices, evaluation criteria, and supplier identities, which could affect ongoing or future tenders if disclosed inappropriately. Additionally, chance exists that procurement data may reveal patterns of favoritism, inflated pricing, or irregular award procedures that could implicate powerful individuals or entities and thus provoke resistance from those who benefit from the status quo. Lastly, respondents fear disclosing procurement details, especially in environments where transparency is weak, may be seen as politically risky or damaging to institutional reputations.

To navigate these barriers, the study relied on an official university introduction letter and a research license from the National Commission for Science, Technology and Innovation (NACOSTI) to establish legitimacy and credibility. These documents assured respondents of the academic nature of the research and reinforced the study's ethical commitment. Additionally, the research instruments explicitly stated that all collected data would be treated with the utmost confidentiality and used solely for academic purposes. These measures were essential in building trust with participants and reducing the perceived risk associated with sharing sensitive procurement-related information.

## 1.9 Operational Definition of Terms

**Public Procurement Price Variance:** This is the difference between market prices, and the prices and which public entities acquire goods. It represents a critical challenge in fiscal governance, reflecting the divergence between expected and actual procurement costs.

**Procurement Planning:** This is the process of determining the needs of the entity, and estimating the cost of these items, to inform budgetary control and financial releases within the fiscal cycle. It often includes a market survey.

**Procurement Audit:** Procurement audits are essential tools for assessing the efficiency and effectiveness of an organization's purchasing processes. These audits help identify any issues that may arise, such as instances of overpricing.

**Procurement Risk Management:** Involves identifying potential risks in the procurement process and developing strategies to mitigate those risks. This is crucial for protecting an organization from financial loss and ensuring that procurement activities align with organizational goals. The study takes specific interest in procurement price risk management model of competitive bidding.

**Market Price Conformance:** ensures that the prices paid for acquired goods and services are in line with current market rates. Achieving market price conformance helps organizations maintain financial stability while fostering transparency in their procurement processes.

**E-Supply Chain Management:** This digital approach integrates technology into supply chain processes, enhancing efficiency and communication between suppliers and

buyers. By utilizing electronic systems, organizations can better track orders, manage inventory, and improve overall operational workflow.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section provides a discussion of the theories guiding this study. Additionally, the section provides a summary of empirical literature relevant to this study, the research gap, and the conceptual framework for this study.

#### **2.2. Theoretical Review**

This section of the study presents a detailed discussion about the different theories that serve as the foundation for this research. It explores the key concepts and ideas that relate to each specific variable being examined in the study. By analyzing these theories, the section aims to provide a clearer understanding of how each variable plays a role in the overall research context. Each theory will be connected to the relevant variable to highlight its importance and relevance. This comprehensive approach helps to clarify the relationships between the theories and the variables, ensuring that readers can appreciate how they contribute to the overall findings of the study.

##### **2.2.1 Value for Money Framework (VFM) and Procurement Planning**

According to Emmi et al. (2011), the Value for Money Framework (VFM) serves as a guiding structure that aims to define how to make the best use of financial resources when making expenditures. The VFM framework focuses on ensuring that resources are used in the most effective way, particularly in scenarios where there are various options for spending money. This idea is further supported by Zhao et al. (2022), who highlight the importance of this optimal utilization in different contexts where financial resources can be allocated. At its core, the

framework encourages decision-makers to identify the most worthwhile spending choices by employing what is known as the 4Es approach. This approach consists of four key components: Economy, Efficiency, Effectiveness, and Equity. When these components are applied, particularly in the procurement process, Economy refers to the importance of sourcing goods, services, and works at the best possible prices while ensuring that quality standards are not compromised. In contrast, Efficiency and Effectiveness revolve around the prudent use of resources and the successful attainment of procurement objectives. Dimitri (2013) underscores that Efficiency relates to getting the most output from the resources used, while Effectiveness is about reaching the desired outcomes.

Equity, one of the critical aspects of the VFM framework, emphasizes the need to consider how vulnerable groups—including youth, women, and individuals with disabilities—are affected. The Public Procurement Regulatory Authority (PPRA) notes in 2024 that this consideration is essential for creating inclusive opportunities within the procurement process. In recent years, the Value for Money Framework has evolved to incorporate additional concepts such as the sustainability of the resources obtained, the management of risks associated with spending decisions, and the overall social-economic outcomes that result from procurement practices. This evolution indicates that VFM is more than a mere tool for reporting expenditures; it represents a dynamic and ongoing process aimed at improving how resources are allocated and how outcomes are achieved. By embracing this framework, organizations can work towards not just achieving cost-effectiveness but also ensuring that their spending practices promote broader social benefits. In this study, the concept of public procurement price variance is recognized as a significant issue leading to substantial loss of public resources. This situation highlights the need to incorporate the principles of Value for Money (VfM) into the process of procurement planning.

When Value for Money principles are integrated effectively, they help ensure that resources are utilized in a cost-effective manner, leading to efficient and impactful results in public procurement activities (Mehkri, 2024). Procurement planning plays a crucial role in this context. It facilitates the establishment of a market price reference, which is vital for determining fair costs associated with goods and services. Additionally, procurement planning allows for an examination of various economic sourcing options, enabling decision-makers to choose the most suitable suppliers. This process involves engaging stakeholders, which is important for gathering insights and feedback that can enhance procurement decisions. Furthermore, managing procurement risks is another key aspect, as it helps to identify potential challenges and develop strategies to mitigate them. The Value for Money framework is instrumental for this study in several ways. It aids in the formulation of the study's hypothesis related to procurement planning and helps in defining specific constructs to be explored throughout the research. Hossain (2015) notes that a particular area of focus within public procurement planning is its potential to facilitate market research and analysis of sourcing options. When public entities invest time in researching the market, they can align their procurement processes more closely with prevailing market prices.

This alignment is crucial, as it can significantly reduce the likelihood and extent of price variance. By anchoring procurement decisions to accurate market prices, public organizations not only optimize their spending but also enhance the overall effectiveness of their procurement strategies.

### **2.2.2 Stewardship Theory and Procurement Audit**

Stewardship theory and Agency theory present differing views on the motivations of managers within a firm. Agency theory suggests that managers may have personal goals that conflict with the company's goals. In contrast, stewardship theory argues that managers, referred to as stewards,

are more focused on promoting the interests of the firm rather than pursuing personal gains that could hinder organizational objectives. According to David et al. (1997), stewards are motivated to enhance the value and success of the company, which in turn benefits all stakeholders involved, including shareholders, employees, and customers. However, Snippert et al. (2015) highlight that there are obstacles preventing the development of an effective stewardship relationship between a purchasing organization and its suppliers. These obstacles include issues like a lack of transparency and a buildup of mistrust. When considering public procurement, which aims to achieve value for money, it becomes evident that these barriers can result in negative outcomes. Specifically, problems such as fraud and the absence of transparency can lead to price discrepancies, exemplified by instances of overpricing in public contracts.

This situation emphasizes the need for mechanisms to identify and address the barriers that compromise the goals of public procurement. Recommendations by Otera (2020) and Kamoni et al. (2024) support the implementation of accountability systems that can counteract potential abuses of the managerial role in public procurement. By reinforcing accountability, these mechanisms aim to ensure that managers prioritize the public interest and work towards maximizing value for money, rather than using their positions for personal gain. In this context, establishing such systems is critical for fostering a more trustworthy and effective management structure in public procurement processes, ensuring that stewards remain aligned with the wider objectives of the firm. This theory therefore provides this study lenses to examine the concept of procurement audit as an accountability mechanism to enhance public procurement stewardship towards value for money, by monitoring price conformance.

### 2.2.3 UTAUT and E-supply chain Management

The Unified Theory of Acceptance and Use of Technology (UTAUT) was created after a careful examination of eight different theories that seek to understand how people adopt and use information technology tools. Vankatesh (2023) highlights its importance in the evaluation of technology acceptance. According to Marikyan and Papagiannidis (2023), the UTAUT theory plays a crucial role in encouraging the acceptance and use of various technological solutions. This theory identifies four key factors that influence how technology is used: performance expectancy, which refers to the perceived benefits of using the technology; effort expectancy, which is about how easy or difficult it is to use the technology; social influence, which involves the impact of others' opinions on an individual's decision to use technology; and facilitating conditions, which include the resources and support available for utilizing the technology effectively. Numerous studies have applied the UTAUT framework to explore both the advantages and challenges related to the use of technology within the public procurement process. Research conducted by Saviah et al. (2024), Shatta (2023), and Addy (2023), has focused on how these factors affect the public sector's ability to adopt technology. Their findings suggest that implementing digitization in procurement processes can significantly reduce human intervention, resulting in improved adherence to regulations and standards.

These studies indicate that e-supply chain management practices can serve as an effective strategy to combat issues such as overpricing, which often arise due to corrupt activities tied to human interference. In light of this theory, the current study aims to formulate hypotheses that will help investigate the relationship between e-supply chain management practices—including e-procurement—and variations in prices within public procurement. This research will also assess

the level of acceptance of e-supply chain tools in the public procurement environment and the associated benefits that arise from their use. By understanding these dynamics, the theory offer insights into how technology can enhance the efficiency and transparency of public procurement activities to achieve price compliance.

#### **2.1.4 Agency Theory on Procurement Risk Management**

Beal-Partyka (2002) discusses the agency theory, which is essential in understanding the dynamics between agents and principals. This theory focuses on the relationship between these two parties, emphasizing a significant issue: the differing goals and risk preferences that may exist. This divergence can lead to two primary complications: goal conflict and information asymmetry. Shevchenko et al. (2022) elaborate on this concept in the context of supply chain management. In complex purchasing situations, it often becomes a challenge for the purchaser, who serves as the principal, to verify the technical capacity and quality of products or services. This difficulty arises primarily because purchasers must depend on the information provided by potential contractors, acting as agents. Bernheim and Whinston (1986) further illustrate how agency theory can be applied to public procurement. They explain that multiple agency problems often arise in this setting due to the interests of various stakeholders, including accounting officers, political figures, public officials, and members of parliament, all of whom may have conflicting interests and high stakes due to substantial financial expenditures.

In the scope of this study, the identified agency problems underscore the importance of recognizing different mechanisms that lead to procurement price variance. This can include issues such as collusion and undue influence, fluctuations in market conditions—whether competitive or monopolistic—inefficiencies within the procurement process, the effectiveness of management

controls, and the capacity to respond to unexpected challenges. Thus, agency theory serves as a critical framework through which to assess the risk management practices associated with public procurement. It helps to clarify the effects these practices have on variations in procurement prices, emphasizing that understanding and addressing agency problems is vital for efficient procurement processes.

## **2.3 Empirical Review**

### **2.3.1 Procurement Planning and Public Procurement Price Variance**

Variance studies have attempted to examine the importance of procurement planning in public procurement. For instance, Fazekas and Blum (2021) in a policy research working paper titled “improving public procurement outcomes” observe that public procurement accounts for huge portions of many nations expenditure; that sometimes experience mismanagement leading to wanton waste. Fazekas and Blum (2021) further opine that procurement plans enable design and supervision of procurement contracts that can save cost, time, and enable achievement of sustainability and social objectives of procurement; such as allocating specific quota to support special interest groups. It enables institution of interventions to achieve substantial savings in procurement. The systematic literature review, though very informative, fails to provide empirical evidence of the effect of procurement planning practices that could deter procurement price variance, particularly in developing economies such as Kenya.

Mothupi, Mukonza, and Khalo (2022) bring to prominence the importance of public procurement planning as a factor determining performance of public procurement. The study examines the impact of procurement planning on funds absorption in a South African procuring entity that experience poor absorption of procurement funds-an indicator of an inefficient procurement

process. The study established that a poor understanding of procedure and implementation of the procurement plan among stakeholders affected the implementation of the procurement plan, among scientific inclined user departments, and recommended training of users on development and implementation of the procurement plan. This study highlights an important aspect, stakeholder involvement in design of procurement plan, of the study on public procurement price variance. Though informative to some aspects of this study, the study may not fully illuminate the answer to the research questions of this study, both geographically, and contextually.

A somewhat similar study focusing on the effect of user participation, need identification, and cost estimation; on public procurement performance in the Republic of Tanzania. The study by Udoba and Mwalukasa (2024) highlights that procurement planning is a significant variable informing the timeliness and cost of procurement that can be particularly enhanced by training users to enhance proper participation in development and implementation of the procurement plan. This according to the study enhances timely delivery. The study further establishes that cost estimation during procurement process, especially by ensuring proper market survey, helps anchor procurement costs, and helps identification of appropriate procurement methods for each item included in the procurement plan. Similar findings, in the same jurisdiction, were established by Changelima et al (2021) who assessed the strategic value of public procurement planning on procurement performance. These studies are very informative to this study's objective. They however presents empirical evidence from Tanzania, and as such may not provide accurate answers to the issues facing public procurement in Kenya.

In Kenya, kariuki and Wabala (2021) assessed the influence of procurement planning on procurement performance of select county governments. The study establishes that procurement planning informs budgeting, and portfolio management. Similarly, Wandera et al (2023) examined

the effect of strategic procurement planning on service delivery of county government. The study alludes that procurement planning is a potent tool to reign in on corruption in the procurement process. The study however fails to elucidate the mechanism in which this happens. Additionally, though both studies are informative to this study, they fail to clearly outline aspects of procurement planning that influence procurement performance, or price variance-that is of interest to this study. The study that most closely aligns and informs this study is the study by Kamoni et al (2024) that alludes to failure by procuring entities to use market prices during cost estimation, either by omission, or as a result of corrupt practices of inflating cost estimates (budgeted corruption) in the procurement plans by procuring entities in Kenya. The study does not however provide empirical evidence of the extent of inflation of prices in the procurement plans of procuring entities.

### **2.3.2 Procurement Audit and Public Procurement Variance**

The interest in understanding the significance of procurement audits on the performance of procurement processes is steadily increasing. Despite this growing interest, there remains a notable scarcity of empirical studies that specifically analyze how procurement audits influence price variance within public procurement. For example, a recent study conducted by Anin et al. (2024) focused on procurement audits in relation to the quality of procurement performance. This research involved a survey of 223 public sector organizations located in Ghana. The findings revealed that both internal and external procurement audits play a vital role in enhancing procurement quality performance. A key factor that emerged from this study is the importance of top management support for these audits. This suggests that while procurement audits contribute positively to the procurement process, their effectiveness is heavily reliant on the backing and commitment of senior management.

In a similar vein, another study by Sallwa (2022) explored procurement audits through the lens of procurement effectiveness, with a focus on Tanzania. This research provided valuable insights into various types of procurement audits, including compliance audits, value-for-money audits, and strategic audits, and their relevance in the procurement process. The evidence gathered from this study indicated that conducting procurement audits, particularly compliance audits, is instrumental in achieving price compliance. These insights underscore the critical role that procurement audits can play in ensuring adherence to pricing regulations, thereby improving overall procurement efficiency and effectiveness. Together, these studies highlight the necessity for further exploration of procurement audits and their impacts, particularly in relation to price variance and overall procurement performance in the public sector.

Ali (2023) presents findings from Tanzania indicating that conducting procurement audits, which specifically focus on ensuring compliance with legal regulations and proper record-keeping practices, can significantly enhance the performance of public procurement systems. This research highlights the importance of transparent and accountable processes in improving overall efficiency and effectiveness in public sector procurement. Furthermore, Okoth (2019) supports this assertion by offering substantial evidence from Uganda. This study outlines how compliance audits play a vital role in shaping procurement practices, particularly in their ability to reduce waste and prevent irregularities. The evidence suggests that systematic auditing acts as a deterrent against inefficient use of resources, contributing to improved procurement outcomes.

In a related investigation, Kharikala and Ndeto (2023) conducted a study in Kenya that focused on the impact of procurement audits within state corporations. Their research reveals that audits aimed at ensuring adherence to established procedures not only foster compliance within organizations

but also lead to increased value for money. By systematically evaluating procurement activities, these audits identify and mitigate the costly consequences that arise from failing to follow proper procedures. This process ultimately supports organizations in achieving their procurement objectives while safeguarding public resources from potential misuse or misallocation. Together, these studies underscore the critical role that compliance audits play in strengthening public procurement practices across multiple countries in East Africa.

### **2.3.3 E-Supply Chain Management and Procurement Variance**

Various studies have investigated the concept of e-supply chain management practices. Fazekas and Blum (2021) provide a systematic literature review that entails comparison of various measures that would yield public procurement efficiency resulting into cost and time efficiency. The review by Fazekas and Blum (2021) contributes evidence to support assertion that adoption of E-procurement could result into cost savings and other efficiencies of the procurement process. The review observes that e-procurement, and its variants, such as public procurement portals, contribute to enhancing transparency and accessibility of the procurement process and procurement information resulting in achievement of procurement efficiency especially by minimizing mismanagement. The review that focuses on public procurement interventions in developing nations contributes to the discussion on importance of adopting e-supply chain tools in procurement; but however fails to elucidate the contextual issues facing adoption of e-supply chain tools in public procurement in developing nations such as Kenya, and their attendant effects on public procurement efficiency, such as price conformance.

In Kenya, the body of research available on e-supply chain management practices is extensive; however, there is a noticeable gap in critically examining how these practices influence price

variance within public procurement. Among the studies conducted, Mungai and Peter (2023) focused on the implementation of e-supply chain tools specifically in the context of hospitals. Their findings indicate that although the adoption of e-procurement and e-logistics in public hospitals is still limited, these technologies have significantly streamlined various procurement and logistics processes. As a result, hospitals are experiencing reduced cycle times, improved communication with suppliers, and enhanced record-keeping capabilities. These improvements facilitate hospitals in delivering more efficient services to patients. Similarly, Oteki (2021) investigated the role of e-supplier management practices. This research highlighted that the use of e-supplier management leads to better information sharing and increased visibility of suppliers. Such enhancements strengthen the organization's overall capacity to provide higher quality services to its customers. In a different study, Rasugu (2021) analyzed how e-procurement affects the supply chain performance of the Kisii County Government.

The findings revealed that e-procurement fosters greater transparency in the procurement process, promotes accountability among stakeholders, and raises the likelihood of selecting the most qualified suppliers. These factors not only improve the procurement process but also contribute to better overall performance within the supply chain. Waithaka and Kimani (2021) echoed similar findings and advocated for the enactment of policies aimed at promoting the adoption of e-procurement within the public sector. Their recommendations suggest that transforming public procurement practices through such technological advancements could lead to more competitive pricing and better resource allocation. Collectively, these studies underscore the need for more in-depth exploration of the impact of e-supply chain management practices on public procurement price variance in Kenya, as their potential benefits are evident but not fully realized.

### **2.3.4 Procurement Risk Management and Public Procurement Price Variance.**

Recently, there has been a noticeable increase in the interest surrounding procurement risk management. However, despite this heightened attention, there remains a significant lack of empirical research focused on how procurement risk management practices are applied, particularly when viewed through the lens of public procurement price variances. For example, Wong (2020) investigates the use of a procurement risk management framework specifically aimed at a multi-criterion supplier selection process, one that incorporates considerations related to sustainability. This study introduces a three-phase dynamic procurement system, which underscores the critical importance of adaptability in effectively controlling and managing risks throughout the procurement process. In a different study, Stentoft and Mikkelsen (2021) address the concerning issue of the absence of procurement risk management practices across various sectors. Their work highlights the potential pitfalls that organizations may face without a structured approach to managing risks. Meanwhile, Hong, Lee, and Zhang (2018) explore the management of risks in situations characterized by uncertainty, further complicating the landscape of procurement risk management.

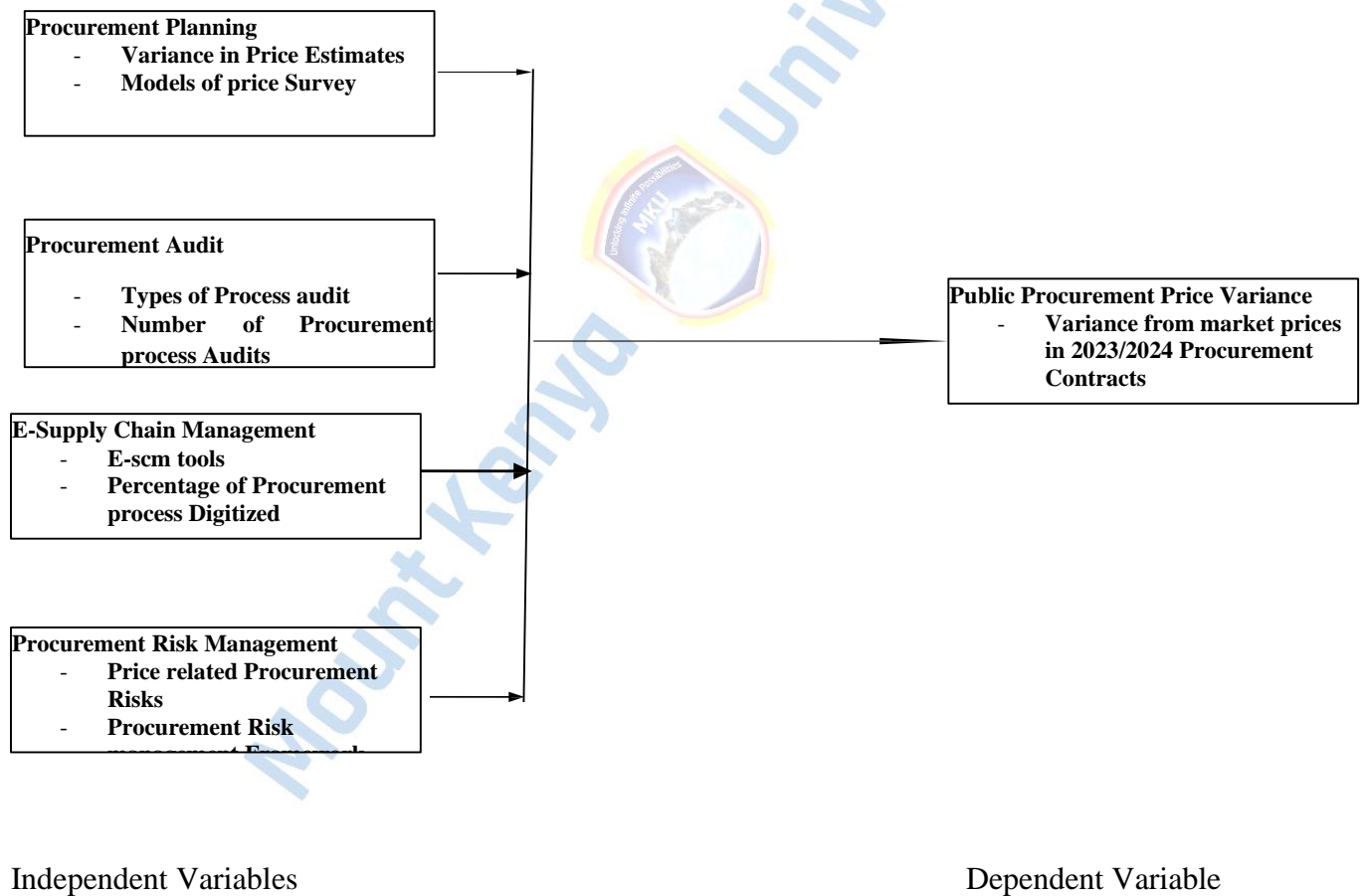
In Kenya, research conducted by Peter et al. (2018) investigates the influence of procurement risk management on large-scale projects within the energy sector. The study reveals a significant shortcoming in how the capabilities of suppliers are assessed. This lack of thorough evaluation creates vulnerabilities, as it becomes challenging to identify potential risks associated with specific contractors. Such oversights have the potential to lead to failures in project procurement, which can adversely affect the success of these vital energy initiatives. The implications of this finding suggest that without a robust mechanism to evaluate supplier capabilities, projects could face

serious setbacks and inefficiencies. In a similar vein, a study by Nyamah et al. in Ghana in 2022 focuses on procurement risk management and its impact on the procurement performance of manufacturing firms. The research highlights that every procurement process is inherently fraught with risks. However, it points out that not all procurement-related risks carry the same weight or level of danger. Some risks are more significant than others and need to be prioritized. Consequently, the authors argue for a decentralized approach to risk management, where each procurement process is managed according to its specific risks. This tailored strategy would ensure that each procurement activity receives the appropriate level of scrutiny and risk assessment, ultimately leading to improved outcomes and more resilient procurement systems in the manufacturing sector.

Collectively, these studies conduct comprehensive literature reviews that reveal a clear connection between effective procurement risk management and improvements in an organization's bottom line. Despite this understanding, there is a notable gap in the research literature, as very few studies have rigorously examined the specific impacts and applications of procurement risk management practices, specifically on public procurement price variance. This lack of inquiry suggests that opportunities exist for further investigation into how these practices can be more effectively integrated into public procurement frameworks, with a particular focus on financial implications related to price variances. The growing body of research highlights the potential for procurement risk management to not only mitigate risks but to enhance overall procurement performance in the public sector.

## 2.4 Conceptual Framework

A conceptual framework serves as a structured guide that helps in understanding and analyzing complex issues or subjects. It provides a clear and coherent set of ideas and principles that outline how different concepts are related to one another. By establishing a foundation for analysis, a conceptual framework aids researchers, scholars, and practitioners in organizing their thoughts and approaches to a particular topic or problem. Figure 2.1 shows the hypothesized relationship between key constructs that are identified as significant to this study.



**Figure 2.1: Conceptual Framework.**

### **2.4.1 Procurement Planning and Price Variance**

The Value for Money components; Economy, efficiency, effectiveness, and equity; are operationalized in the procurement process through investment in market research, and analysis of procurement methods, as well as consideration of participation of vulnerable groups in the procurement process. This is expected to anchor public procurement prices to realism, and promote achievement of the public procurement objectives within the value for money framework. This study will examine the variances, from market prices, of the prices in the procurement plan, as well as predominant methods of procurement, as well as proportion of procurement set aside for the youth- as predictors of public procurement price variance in public procuring entities procurement contracts.

### **2.4.2 Procurement Audit and Price Variance**

The stewardship theory reveals that the implementation of accountability systems that can counteract potential abuses of the managerial role in public procurement; and thereby reinforce accountability. These mechanisms aim to ensure that managers prioritize the public interest and work towards maximizing value for money, rather than using their positions for personal gain. In this context, establishing such systems is critical for fostering a more trustworthy and effective management structure in public procurement processes, ensuring that stewards remain aligned with the wider objectives of the firm. The Public Procurement internal audit mechanism is therefore seen as a mechanism to identify, and deter, deviations from expectations, and thus reinforce achievement of fair price objective in the public procurement processes of public procuring entities.

### **2.4.3 E-Supply Chain Management and Price Variance**

The use of electronic supply chain tools has the potential to bring significant efficiencies to the public procurement process. These tools enhance the overall visibility of prices, enabling stakeholders to gain clearer insights into cost structures. By making pricing information more accessible, electronic supply chain tools can effectively address persistent issues such as overpricing. Overpricing often stems from corrupt practices that occur due to human involvement, where biases and unethical behavior may influence financial decisions and contracts. Increased visibility can act as a deterrent to such activities, promoting accountability and transparency within the procurement system. This study aims to explore the various types of electronic supply chain tools that are currently in use and how they function within the procurement framework. Furthermore, it will analyze the impact of these tools on compliance with established pricing standards. Through this examination, a deeper understanding of the role that e-supply chain tools play in regulating prices and mitigating corruption in public procurement will be achieved, highlighting their importance as a strategic response to current challenges faced in the field.

### **2.4.4 Procurement Risk Management and Price Variance**

In the context of this study, agency theory provides a framework for understanding the various agency problems that arise in the public procurement process. These problems highlight the necessity of identifying and addressing the different mechanisms that contribute to variations in procurement prices. Key issues that may lead to discrepancies in costs include problems such as late payments to suppliers, which can disrupt financial planning and operational efficiency. Furthermore, collusion among bidders or undue influence exerted by external parties can compromise the integrity of the procurement process, resulting in unfair advantages that skew

pricing. Additionally, fluctuations in market conditions, whether characterized by competitive dynamics or monopolistic practices, can significantly impact pricing strategies and outcomes. The presence of inefficiencies within the procurement process itself, such as bureaucratic delays and lack of transparency, can further exacerbate agency problems and lead to undesired financial consequences.

The effectiveness of management controls plays a crucial role in mitigating these issues, as robust oversight can help ensure that procurement activities align with established guidelines and standards. The implementation of public procurement risk management is essential. It serves as a comprehensive framework that addresses the diverse agency problems identified within the public procurement process. By doing so, it fosters efficient procurement procedures and promotes price conformity, ultimately leading to better resource allocation and value for public funds.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

This study examined the effect of public procurement management practices on public procurement price variance. The study sought to describe the management practices applied in each public procuring entity, and their bearing on public procurement price variance from market prices. The study will therefore adopt a descriptive business research design. According to Easterby-Smith et al (2021), descriptive business research design is a systematic approach that focuses on describing the characteristics of a particular phenomenon within the business context. This design seeks to provide a detailed account of various elements, including the behaviors, attitudes, and attributes of individuals or groups related to specific business activities or market trends. By employing this method, researchers aim to gather comprehensive data that paints a clear picture of the existing situation or trend. However, descriptive research designs are useful for identifying patterns and associations between variables but cannot establish cause-and-effect relationships (Aggarwal, 2019). Since they lack control over variables, any observed relationships must be interpreted cautiously, as they do not confirm direct causality.

#### **3.2 Population of the Study**

The concept of population in a research study, as defined by Bell, Bryman, and Harley (2022), pertains to the specific set of items or subjects from which data will be gathered for analysis. This research focused on collecting data related to procurement price variance as well as the management practices associated with public procurement within various governmental bodies.

Specifically, the study aims to investigate these aspects in government agencies in Kenya. Consequently, the targeted population for this research consists of all government agencies operating within Kenya. In total, the study encompassed a population of 176 agencies, providing a substantial basis for data collection and analysis. These was the unit of analysis of the study; while the unit of observation will be the procurement manager of each Agency, or their equivalent.

### **3.3 Sampling**

The study will adopt Yamane's formula to draw a sample of 122, using random sampling as guided by Bell et al (2022). Given: N = Population of study; K = Constant (1); e = degree of error expected

n=sample size

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

$$n = 122.$$

### **3.4 Data Collection**

The study will collect 2 sets of data. The study collected data on procurement price variance. This entailed collection of market data on 15 commonly procured items in the year 2023/2024 Financial year. To enable establishment of price variance, public procurement price data will also be collected from the procuring entities on the same items in the 2023/2024 Financial Year. The study collected data on public procurement management practices in the agencies under study; using objectively prepared questionnaires. The questionnaires were circulated using Google forms, while unreachable respondents will be sought using drop and pick methods.

### **3.5 Pilot Study**

The study conducted a pilot study involving 12 public procuring entities located in Kiambu County. Entities in Kiambu County were selected for the pilot study due to their close proximity and socio-economic similarities to Nairobi, providing a relevant context for testing research tools. Additionally, Kiambu hosts a diverse range of public institutions, making it suitable for evaluating the applicability and reliability of the study instruments before full deployment in Nairobi. This pilot study aimed to thoroughly examine the appropriateness and effectiveness of the research instrument that has been designed for this investigation. A primary focus of this examination was to assess both the validity and reliability of the instrument in question. Validity refers to the research instrument's capability to accurately measure what it is intended to measure (Surucu & Maslakci, 2020). This aspect is crucial, as it ensures that the research questions are appropriately constructed and structured to capture the relevant data.

The validity of the instrument was evaluated to ascertain whether it effectively aligns with the objectives of the study. Reliability was examined using Chronbach's Alpha, a statistical measure widely employed to evaluate the consistency of the instrument over time (Taherdoost, 2021). To quantify reliability, a standard threshold of 0.7 was established. This cutoff point is significant as it indicates an acceptable level of reliability, suggesting that the research instrument produces consistent results across different instances of measurement.

### **3.6 Data Analysis**

The study examined the effect of public procurement practices (Procurement Planning, Procurement Audit, E-Supply chain Management, and Procurement risk management) on public procurement price variance. Data collected was be coded, and descriptive statistics was generated

using SPSS version 25. Additionally, the study determined level of variance of public procurement prices, from market prices, using the formula:

Procurement Price Variance:

$PPV = \frac{\text{Set Price} - \text{Actual Price}}{\text{Set Price}} * 100$ :

Where: Set Price= Market Price (Set by Market forces); Actual Price= Prices of items acquired by Public procuring entities.

NB: The set price used was the average prevailing price of commodities examined in the year under study.

To examine the effect of the public procurement practices on procurement price variance, the study relied on multiple regression using the model  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$ ; Where; Y =Public Procurement Price Variance (PPPV);  $\beta_0$  = constant (coefficient of intercept); X1, X2, X3, X4, are independent variables; and  $\beta_1, \beta_2, \beta_3, \beta_4$ ; are regression coefficient of the variables.

### **3.7 Ethical Consideration**

The study considered all ethical requirements of research, including confidentiality, informed consent, regulatory control, data storage, and anonymity. Firstly, informed consent will be sought from all respondents, ensuring that participation is voluntary and that respondents are fully aware of the study's purpose, procedures, and their rights, including the right to withdraw at any point. Secondly, the proposal will be submitted to the University's Ethical Review Committee (ERC) for ethical clearance to ensure compliance with institutional standards for responsible research. Thirdly, in line with national legal requirements, the study will obtain a research license from the National Commission for Science, Technology and Innovation (NACOSTI). Further, all collected data will be stored securely in password-protected digital files and locked physical storage where applicable, accessible only to the research team. Additionally, the anonymity of participants will

be preserved by assigning unique identifiers instead of personal names or identifiable details, ensuring that individual responses cannot be traced back to specific participants.



## CHAPTER FOUR

### FINDINGS AND DISCUSSION

#### 4.1 Introduction

This chapter presents the analysis of data collected in the study. Specifically, the chapter provides results of the pilot study, and the results of the descriptive and inferential analysis on the data on the study variables. A discussion section is provided for each element of analysis.

#### 4.2. Pilot Study Results

In order to examine the reliability of the questionnaire that was used to collect data, the study subjected the instrument to a pilot study. The pilot study involved 12 public entities from the county of Kiambu. The public entities from Kiambu were chosen not only for their proximity to Nairobi, where the agencies under study are domiciled, but also because they share operational similarity and structured, and are subject to the same procurement legal framework. The study calculated the Chronbach's Alpha for the study variables. The results of the analysis reveals that all items had a Chronbach's alpha above 0.7-the cut-off value for reliabilities. The results of the analysis is shown on table 4.1.

**Table 4.1: Pilot study**

Items	Chronbach's Alpha
Procurement Planning	0.782
Procurement Audit	0.790
E-Supply Chain Management	0.868

This analysis reveals that the questionnaire was structurally, and thematically sound. As such it could be deduced that the questionnaire could be relied upon to collect data required for the study consistently and accurately as recommended by Taherdoost (2021).

### 4.3. Response Rate

The study intended to collect data from a sample of 122 government agencies in Nairobi. Therefore, 122 questionnaires were issued to procurement managers of these agencies, or their equivalent. However, 27 questionnaires were incompletely filled, while 22 questionnaires were not returned by the time of conducting analysis. Therefore the study achieved a response rate of 59.83%. The results of the analysis on the study response rate is shown on table 4.2.

**Table 4.2: Response Rate**

	Q. issued	Q. returned-Incomplete	Q. Not Returned	Q. Responsive
Frequency	122	27	22	73
Percentage	100	22.13	18.03	59.83

The response rate of this study was deemed sufficient, as suggested by Aityan (2022), to permit data analysis and reliance on the results for statistical inference. However, further analysis into the non-response and incomplete questionnaires reveals that a substantial number of questionnaires were not returned or returned incomplete. This indicates that a significant number of entities were not open to scrutiny or their procurement processes, which contradicts the principles of the

Constitution of Kenya (2010). A key factor contributing to this non-response is the reluctance of public procurement managers to disclose procurement-related information.

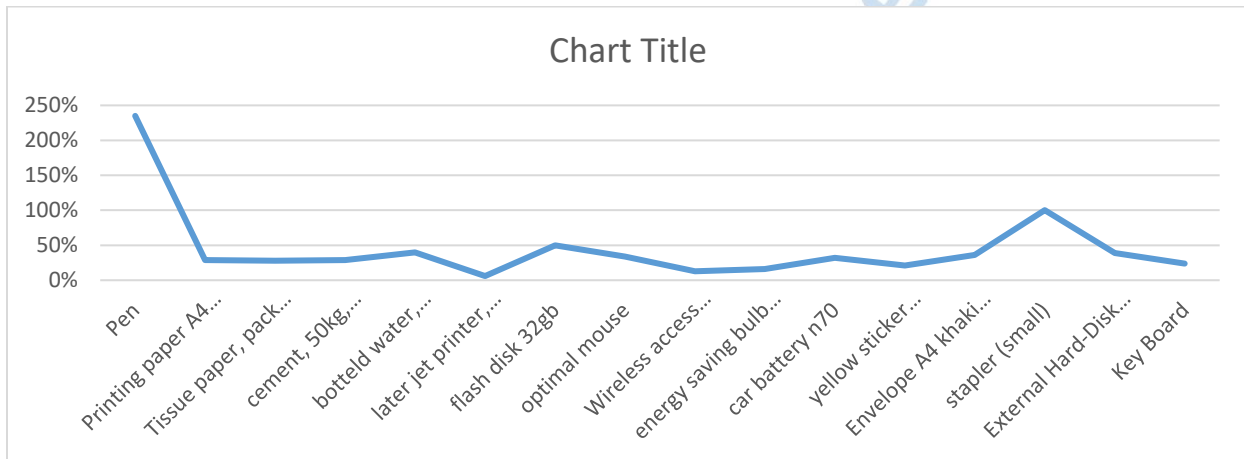
Several reasons may explain this resistance, including concerns about confidentiality, bureaucratic restrictions, fear of misinterpretation or repercussions, and the heavy workload associated with their roles. Additionally, procurement processes are often influenced by political and external pressures, further discouraging transparency. The institutional culture of secrecy in some public entities also plays a role, as does the lack of perceived benefit in participating in academic research. This resistance underscores broader challenges in ensuring accountability within public procurement in Kenya. While public entities are constitutionally mandated to uphold transparency, persistent barriers to disclosure highlight the need for stronger institutional safeguards and policy interventions that promote openness while addressing procurement officials' concerns.

#### **4.4 Demographics**

The study's unit of observation was procurement managers or their equivalent. The study asked these respondents to indicate the period they have practiced in the agency's procurement function. 60% of the respondents have practiced in the organizations supply chain function for a period between 3 and 5 years, while 30% and 10% have practiced between 6 and 10 year, and above 10 years respectively. This means that majority of the respondents were well versed with the operations of the agencies and could thus be relied upon to provide credible insights into the variables of this study.

#### 4.5. Public Procurement Price Variance in Government Agencies in Nairobi.

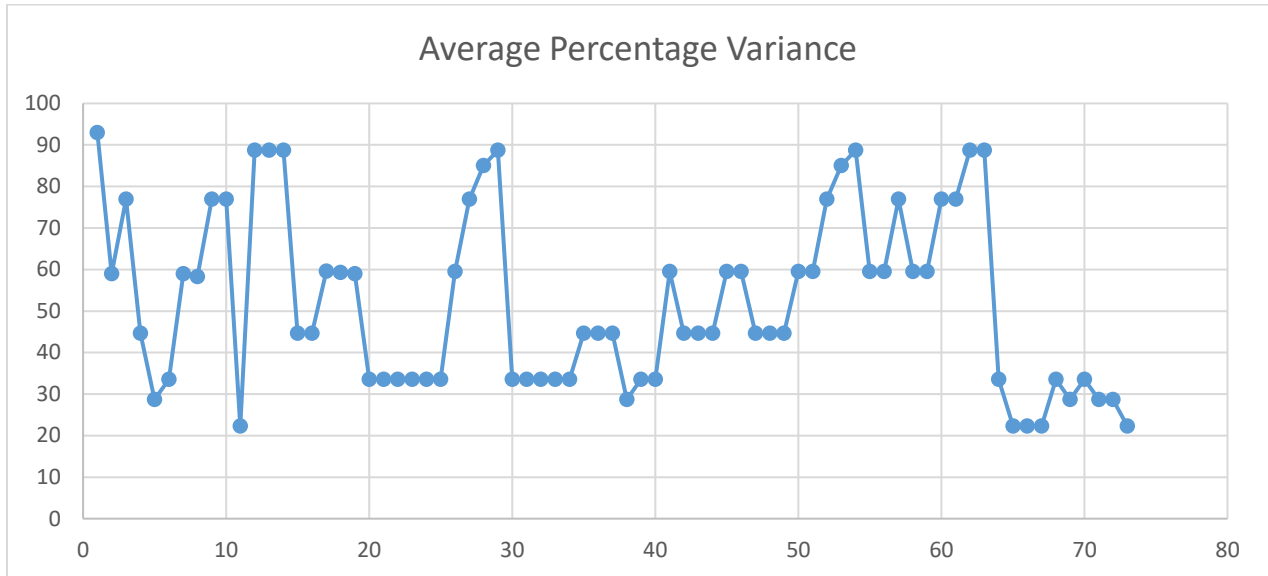
This study's main theme of interest was Public Procurement Price Variance in Public entities. The study explored price variance; by examining the difference between public procurement prices, contained in supply contracts of government agencies in the 2023/2024 financial year; and market prices of 15 items in the same year. The analysis reveals overpricing on all items to varying degrees. The highest price variance was 235% overpricing, while the least was 6% overpricing. The results of the analysis is shown in figure 4.1.



**Figure 4.1: Percentage Public Procurement Price Variance on Items**

The results show a prevalent price variance (over-pricing), across all the items procured by government agencies in the 2023/2024 financial year. These results indicate that public entities are losing substantial amounts of public funds through overpricing. These results compare well with the results of the study by Kamoni et al (2024) that established prevalent overpricing. Further, the study analyzed average price variance in each government agency. The study established that government agencies have varying levels of average price variance. A substantial number of entities in the study recorded average variance of 50% and above. This indicates that while price

variance is rampant, some agencies record higher general price variance (over-pricing) than others. The results of the analysis are shown on figure 4.2.



**Figure 4.2 Average Entity Price Variance across the 15 Items.**

#### **4.6. Procurement Planning and Public Procurement Price Variance in Government Agencies in Nairobi.**

This study sought to examine the effect of procurement planning on public procurement price variance in government agencies in Kenya. The study collected and analyzed data on public procurement practices in the government agencies in Nairobi. This section provides the results of the descriptive and inferential analysis

##### **4.6.1 Descriptive statistics on Procurement Planning and Public Procurement Price Variance in Government Agencies in Nairobi.**

The study examined the models of procurement planning used by government agencies in Nairobi. The study specifically sought to find out the dominant method of establishing price estimates in

the procurement plan. The study aggregated these methods into two: 1. Based on Market Research; or 2. Based on estimates of the previous procurement plans. The analysis revealed that in 40 agencies, prices in the procurement plan were based on market research; whereas in 33 firms, the predominant methods entailed estimating current prices based on previous year procurement plans. The results of the analysis are shown on Table 4.3.

**Table 4.3: Method of Procurement Plan Price Estimation**

Item	Frequency	Percent
Procurement Plan Price-Based on Previous plans	33	45.2
Procurement Plan Price-Based on Mkt Research	40	54.8
Total	73	100

This indicates that in almost half of the agencies, public procurement plans are not based on factual pricing informed by market research; but are rather based on estimates not ground on market data. This implies that opportunity then exists for poor price conformance, as a substantial portion of procurement plans, that inform budgets, are based on uninformed estimates. This also indicates that a substantial portion of public entities are not conforming to procedural requirements when developing procurement plans.

#### **4.6.2 Inferential Statistics on Procurement Planning and Public Procurement Price Variance in Government Agencies in Nairobi.**

This study sought to answer the research question: what is the effect of procurement planning on public procurement price variance in government agencies in Nairobi. The variable of study was transformed into a dummy variable; where 1, represented plans based on Market research; and 0,

plans based on previous year plans. The study conducted regression analysis using the regression model:  $Y = \beta_0 + \beta_1 X_1 + \epsilon$ ; Where;  $Y$  = Public Procurement Price Variance;  $\beta_0$  = constant (coefficient of intercept);  $X_1$  is procurement planning; and  $\beta_1$ , is the regression coefficient. The results of the analysis revealed an R squared of 0.849, and a P-Value of 0.000. This indicates that procurement planning (price estimates model) has a significant and substantial effect on the public procurement price variance. The results of the analysis is shown on Table 4.4.

**Table 4.4: Regression of Public Procurement Price Variance on Method of Procurement Plan Price Estimate.**

R-Squared	P-value
.849	.000
co-efficient: B, 71.991, X1, -36.125	

The resultant regression model becomes:  $Y = 71.991 - 36.125 X_1$ . This implies that a procurement plan based on market survey, as opposed to estimation model based on previous procurement plan prices, leads to 36.125% reduction in the average price variance in an entity. These results imply that market survey strategy of determining procurement plan prices is a potent tool in overcoming price variance. The findings of this study auger well with the findings of Wandera et al (2023) who alludes that procurement planning has a strategic role and is a potent tool of overcoming inefficiency in the public procurement process.

#### **4.6.3 Discussion on Procurement Planning and Public Procurement Price Variance in Government Agencies in Nairobi.**

The study established that while a substantial portion of agencies, roughly half the sample, base their procurement plans prices on market data, the other half does not give a factual basis, for the

procurement plan prices. This absence of market research in public procurement planning creates a systemic risk of overpricing, as budgets are based on uninformed estimates rather than actual market conditions. This leads to inflated costs, inefficient resource allocation, and weak financial discipline, ultimately undermining value for money in public spending. The findings of this study supports the arguments of various researchers, such as Fazekas and Blum (2021), who assert that in the absence of factual pricing benchmarks, procurement officers lack leverage to negotiate fair prices, allowing suppliers to manipulate bids and inflate costs. As indicated in Fazekas et al (2020), overpricing fosters corruption, as inflated budgets create opportunities for collusion and kickbacks. It also distorts market competition, favoring suppliers who exploit procurement weaknesses over those offering fair pricing. As a result, public procurement becomes a vehicle for inefficiency rather than a tool for cost-effective service delivery.

It is worth noting that the Public Procurement and Asset Disposal Act (2015) of Kenya provides that accounting officers must ensure price compliance; especially through the use of Market Price Index provided by the Public Procurement Regulatory Authority, its notable that a substantial number of entities escape this regulatory provision. This failure by procuring entities to use market prices during cost estimation, supports the ration that it is as a result of corrupt practices of inflating cost estimates (budgeted corruption) in the procurement plans by procuring entities in Kenya. The study establishes that the application of market survey in determination of procurement plan prices has a significant and a substantial effect on public procurement price variance. It leads to reduction in average price variance in the public entities in the study. This implies that market surveys provide an opportunity to anchor public procurement prices to the realism of market prices and thus provide a better platform to achieve price conformance-hence reduced price variance.

The findings of this study support the argument of Kamoni et al (2024), and Udoba and Mwalukasa (2024), who highlight that procurement planning is a significant variable informing the timeliness and cost of procurement that can be particularly enhanced by training users to enhance proper participation in development and implementation of the procurement plan. The studies assert that procurement planning based on market survey enables realistic cost estimation during procurement process, and helps anchor procurement costs, and helps identification of appropriate procurement methods for each item included in the procurement plan.

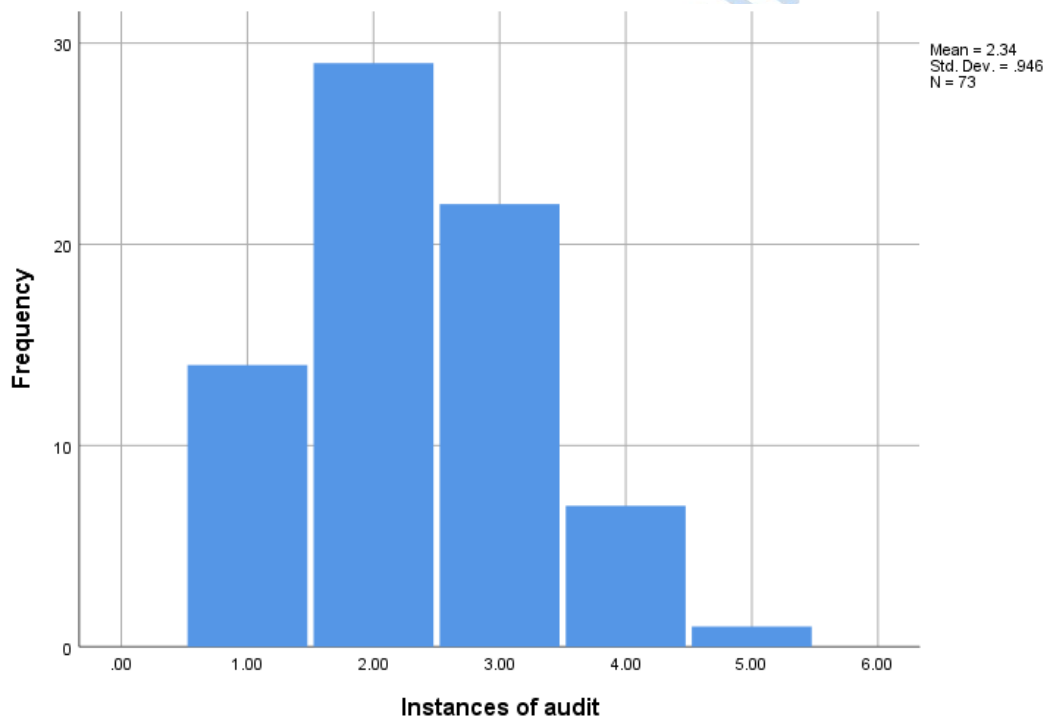
#### **4.7 Procurement Audit and Public Procurement Price Variance in Government Agencies in Nairobi.**

This study sought to find out the effect of procurement audit practice on public procurement price variance in government agencies. The study focused on examining the nature of procurement audit in public agencies; specifically, the types and instances of procurement audits. This section provides the results, and discussion of the descriptive and inferential statistics.

##### **4.7.1 Descriptive Statistics on Procurement Audit and Public Procurement Price Variance in Government Agencies in Nairobi.**

Firstly, the study examined whether a procurement audit sub-function function exist in government agencies. The analysis revealed that the procurement sub-function was not existing in any of the sampled entities. This implies that the procurement audit practice is yet to take root in public entities, despite its importance, as highlighted in Ali (2023) who intimates that conducting procurement audits, which specifically focus on ensuring compliance with legal regulations and proper record-keeping practices, can significantly enhance the performance of public procurement systems.

Secondly, the study on procurement audit practice asked respondents to indicate the instances when routine audits are performed during procurement proceedings. The analysis of the responses indicate that in majority of the government agencies, 39.7% and 30.1% of the agencies respectively, procurement audits were conducted in 2 and 3 instances of the procurement process respectively. The most common instances were procurement audits during contract administration, post contract implementation, and when integrity issues and disputes arose. Very few entities conducted procurement audits on the Procurement plan, and audits before award of contract. The results of the analysis are shown in figure 4.3.



**Figure 4.3: Instances of Procurement Audit.**

These results indicate that majority of the government agencies rarely conduct procurement audits to verify price conformance, and therefore miss the opportunity to drive price conformance. Notably, extant empirical evidence such as in Sallwa (2022), indicates that various types of

procurement audits, particularly compliance audits, is instrumental in achieving price compliance. These insights underscore the critical opportunity missed by the government agencies in achieving price conformance, thereby an opportunity missed at improving overall procurement efficiency and effectiveness.

**4.7.2 Inferential Statistics on Procurement Audit and Public Procurement Price Variance in Government Agencies in Nairobi.**

Further, the study sought to examine the effect of the procurement audit practice on the price variance in government agencies in Nairobi. The study was guided by the regression model:  $Y = \beta_0 + \beta_1 X_1 + \epsilon$ ; Where; Y =Public Procurement Price Variance (General-average percentage price variance in a firm);  $\beta_0$  = constant (coefficient of intercept);  $X_1$  is Procurement Audit (Instances of Procurement Audit); and  $\beta_1$ , is the regression coefficient of Procurement Audit; the analysis yielded the following statistics shown on table 4.5

**Table 4.5: Regression Results: Procurement Audit and Public Procurement Price Variance.**

R-Squared	P-value
.904	.000
co-efficient: B, 99.924, X1, -20.375	

The R square 0.904 (P-Value 0.000) indicates that procurement audits have a significant and substantial effect on the public procurement price variance in government agencies in Kenya. The resultant regression model of the analysis becomes.  $Y = 99.924 - 20.375 \text{ProcAudit}$ . This means that an increase in instances of procurement audits by 1, leads to a reduction of average public procurement variance in an entity by 20.375%.

These findings support the assertion of Okoth (2019) who opines that compliance audits play a vital role in shaping procurement practices, particularly in their ability to reduce waste and prevent irregularities. The evidence suggests that systematic auditing acts as a deterrent against inefficient use of resources, contributing to improved procurement outcomes.

#### **4.7.3 Discussion of Findings on Procurement Audit and Public Procurement Price Variance in Government Agencies in Nairobi.**

Data suggest that procurement function have not set up procurement audit subsections. This is even as section 27 of the Public Procurement and Asset Disposal Act (2015) suggests that the accounting officer should ensure the proper management of the procurement function, which includes the internal processes and audits to assess compliance and effectiveness. Further, The data suggests most government groups seldom check if prices paid match agreed terms. This lack of regular procurement audits means they often fail to confirm price conformance. For example, agencies might not check if volume discounts were correctly applied. They could miss overcharges on invoices. Price conformance audits help ensure that contract terms are followed. These audits can find errors, prevent waste, and improve how money is spent. Without these checks, as recommended by Sallwa (2022) government agencies in Kenya lose chances to make sure they pay the right price for goods and services.

It is intriguing that very few public entities conduct conformance procurement audits; yet the Public Procurement and Asset disposal Act mandates the Accounting officer to ensure that prices offered in procurement contracts are fair, competitive, and in line with the market rates, and that they conform to the procurement process requirements. Additionally, the Public Procurement Regulatory Authority, The study provides empirical evidence that systematic procurement audit

of the procurement process, particularly compliance audit-which should include price conformance- provides an opportunity to reduce significantly, the percentage of public procurement price variance.

The finding that procurement audits support mitigation of public procurement price variance, especially manifesting as overpricing supports Otera (2020) and Kamoni et al. (2024) arguments that implementation of accountability systems that can counteract potential abuses of the managerial role in public procurement. By reinforcing accountability, through conformance procurement audits, these mechanisms aim to ensure that managers prioritize the public interest and work towards maximizing value for money, and enhance public procurement stewardship towards value for money, by monitoring price conformance.

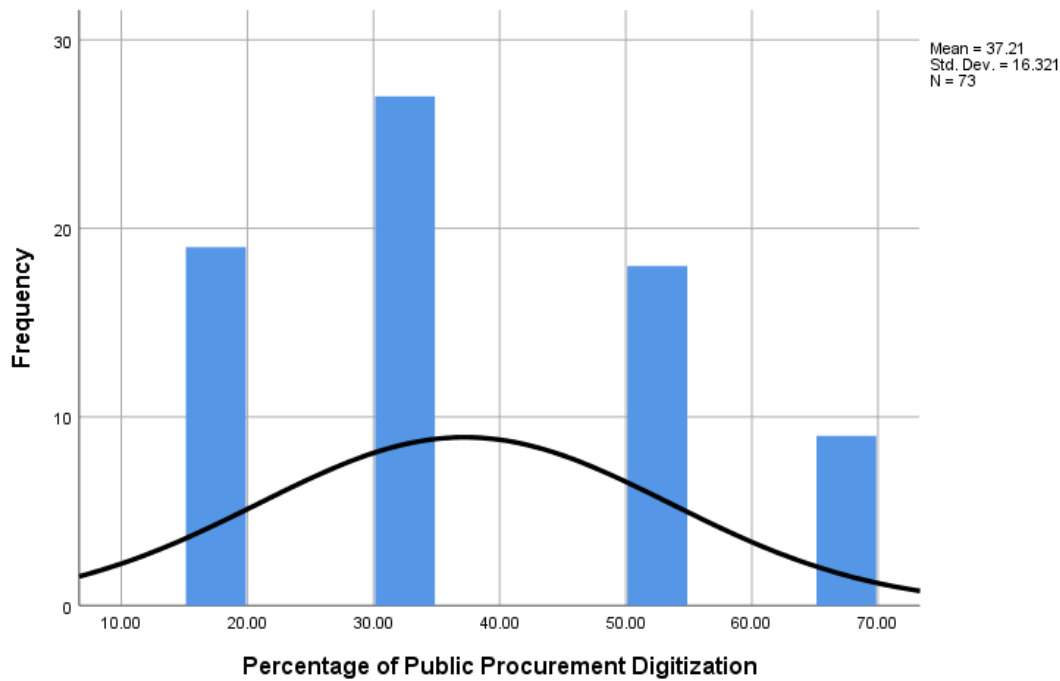
#### **4.8 E-Supply Chain Management and Public Procurement Price Variance in Government Agencies in Nairobi.**

The study on E-supply chain management focused on examining the level of digitization of the public procurement process in the government agencies in Nairobi. This section provides the result and discussion of the analysis.

##### **4.8.1 Descriptive statistics on E-Supply Chain Management and Public Procurement Price Variance in Government Agencies in Nairobi.**

The study asked respondents to describe the level of digitization of the procurement process in the government agencies across six phases: Procurement Planning, requisition processing, advertisement and Bid processing, documentation management, and supplier communication. Using the responses, the study computed estimated levels of digitization of the procurement process in each government agency. Analysis of the responses reveals that majority, 27, 19, and

18 government agencies have digitized approximately 33.33%, 16.67%, and 50% of their procurement processes. Only 9 government agencies had digitized 66.67% of their procurement process. This was the highest level of digitization observed by this study. Notably, Procurement planning, and requisition processing, and bid processing were the least digitized phases of the procurement process in the government agencies. This analysis is shown on Figure 4.4



**Figure 4.4: Estimated Level of Digitization of the Procurement Process.**

This analysis indicates that government agencies in Nairobi have adopted a relatively low level of digitization of the procurement process. This finding mirrors the finding of Kamoni (2020) who established similar findings on adoption of e-procurement in public entities.

#### 4.8.2 Inferential Analysis on E-Supply Chain Management and Public Procurement Price Variance in Government Agencies in Nairobi.

The study sought to examine whether E-supply chain management has a significant effect on public procurement price variance in government agencies in Nairobi. The data collected was analyzed using regression analysis guided by the following model:  $Y = \beta_0 + \beta_1 X_1 + \epsilon$ ; Where;  $Y$  = Public Procurement Price Variance;  $\beta_0$  = constant (coefficient of intercept);  $X_1$  is Estimated Percentage of Procurement Process Digitized; and  $\beta_1$ , is the regression coefficient of Estimated Percentage of Procurement Process Digitized. The results of the analysis are shown on table 4.5.

**Table 4.6: Regression Analysis of Percentage public Procurement Price Variance on E-supply Chain Management.**

R-Squared	P-value
.862	.000
co-efficient: B, 97.315, X1, -1.212	

The analysis yielded co-efficient of determination of 0.862, and P-Value of 0.000. This implies that Digitization of the procurement process has a significant and substantial effect on public procurement price variance in government agencies in Nairobi. The resultant regression model was: Average Percentage Procurement Price Variance =  $97.315 - 1.212 E_{scm}$ . This means that an increase in level of digitization by 1% results in 1.212% decrease in average level of price variance in a government agency. These findings support the findings of the review by Fazekas and Blum (2021) that presented to support the assertion that adoption of E-procurement could result into cost savings and other efficiencies of the procurement process.

#### **4.8.3 Discussion of Analysis on E Supply Chain Management and Public Procurement Price Variance in Government Agencies in Nairobi.**

The study highlights a limited uptake of digital technologies in public procurement processes, suggesting that government agencies may miss out on the substantial benefits associated with digitization. According to Mungai and Peter (2023), the adoption of e-procurement systems can streamline procurement and logistics operations. Specifically, digitization can lead to reduced cycle times, allowing for faster decision-making and processing. It also improves communication with suppliers, fostering better collaboration and transparency. Furthermore, e-procurement enhances record-keeping, ensuring more accurate and accessible documentation. Additionally, digitization provides greater price visibility, enabling procurement teams to easily compare supplier prices, promoting competition and potentially leading to cost savings. Without embracing these advancements, government agencies risk inefficiencies and may not realize the full potential of digital transformation in procurement.

Further analysis of the study indicates that incremental digitization of the procurement process leads to a significant reduction in public procurement price variance, which aligns with the findings of Rasugu (2021). The study suggests that as government agencies gradually digitize their procurement processes, it improves transparency and visibility, especially regarding pricing information. This enhanced visibility enables procurement teams to more easily compare supplier prices and monitor pricing trends. As a result, there is greater price conformance, where suppliers are more likely to adhere to expected price ranges, reducing price discrepancies. By elevating transparency and making pricing more accessible and comparable, digitization helps mitigate the factors that typically cause price variance in procurement, leading to more predictable and

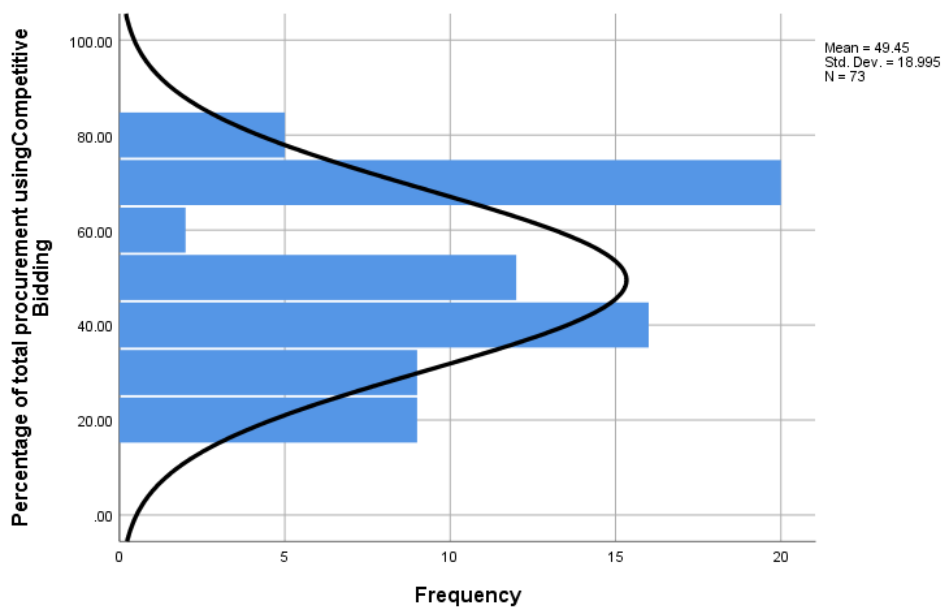
controlled costs. This supports the argument that digitization not only improves efficiency but also strengthens cost management in public procurement processes.

#### **4.9 Procurement Risk Management and Public Procurement Price Variance in Government Agencies in Nairobi.**

The study sought to examine the procurement risk management framework applied by government agencies during the acquisition of goods, works and services. This section presents the descriptive and inferential analysis of the study and discussion of the results on procurement risk management framework.

##### **4.9.1 Descriptive Analysis on Procurement Risk Management and Public Procurement Price Variance in Government Agencies in Nairobi.**

The study on Procurement risk management focused on identifying and addressing the different mechanisms that contribute to variations in procurement prices. The study specifically examined the contribution of competitive dynamics on the pricing outcomes of the public procurement processes. Therefore the study assessed the percentage of procurement conducted through competitive bidding in each entity. The analysis of data collected revealed that in 9, 16, and 12 government agencies in Nairobi, open tendering accounted for between 30-40, 40-50, and 50-60 percent respectively, of total procurement in the financial year 2023/2024. The results of this analysis is shown in figure 4.5.



**Figure 4.5: Percent of Procurement through Competitive Bidding**

These results show that while there is good use of competitive bidding as recommended in the Public Procurement and Asset Disposal Act (2015); non-competitive methods also feature substantially in acquisition of goods, works and services by public entities. The prevalent use of non-competitive methods could explain the prevalent overpricing as they enable mechanisms for price setting above market price.

#### **4.9.2 Inferential Analysis on Procurement Risk Management and Public Procurement Price Variance in Government Agencies in Nairobi.**

The study sought to examine the effect of competitive bidding, as a procurement price risk management model, on public procurement price variance in government agencies in Nairobi. The analysis was guided by the regression model:  $Y = \beta_0 + \beta_1 X_1 + \epsilon$ ; Where; Y =Public Procurement Price Variance;  $\beta_0$  = constant (coefficient of intercept);  $X_1$  is Percentage of total procurement

through competitive bidding; and  $\beta_1$ , is the regression coefficient of Percentage of total procurement through competitive bidding. The results of the analysis are shown on table 4.7.

**Table 4.7: Regression Analysis of Percentage public Procurement Price Variance on Percentage of Total Procurement through Competitive Bidding**

R-Squared	P-value
.940	.000

co-efficient: B, 106.006, X1, -1.088.

The analysis yielded a co-efficient of determination of 0.940, and a p-value of 0.000. This means that the competitive bidding as a procurement price risk management model significantly and substantially affects public procurement price variance. The regression model becomes: Average Public procurement Price variance in an agency =  $106.006 - 1.088$ ; indicating that an increase in one percent of total procurement conducted through competitive bidding results in 1.088% reduction in average price variance. This finding supports the finding of Nyamah et al. (2022) that espouses that appropriately applied procurement risk management tools could yield process efficiency.

#### **4.9.3 Discussion on Analysis on Procurement Risk Management and Public Procurement Price Variance in Government Agencies in Nairobi**

The study observes that competitive bidding offers a good opportunity to manage price inflation risks, and thus reduces magnitude of public procurement price variance. The study however observes a substantial, widespread, reliance on non-competitive procurement methods in Kenya's public sector. This could be a substantial driver of overpricing by allowing price-setting mechanisms that inflate costs beyond market rates. This supports the assertion of Peter et al (2018), procurement mechanisms that deprive the process the opportunity to critically evaluate bids give

rise to procurement risks. On the contrary, Competitive bidding fosters transparency and price discovery, ensuring that suppliers compete to offer the best value. However, when public entities engage in direct procurement, restricted tendering, or single-sourcing, they eliminate the natural cost-control mechanisms that competition enforces.

This absence of market-driven pricing enables suppliers to dictate higher prices without the risk of being undercut. Perhaps, the mechanism of overpricing could also be linked to corruption and favoritism fostered in non-competitive procurement fosters corruption and favoritism as alluded by Fazekas, Sberna, & Vannucci, (2022), where suppliers inflate costs knowing they will secure contracts without scrutiny. The lack of price transparency further exacerbates the problem, as public entities often do not have access to real-time market data to verify fair pricing, creating an environment where price manipulation thrives. Limited accountability in non-competitive procurement allows excessive pricing to go unchecked.

## CHAPTER FIVE

### SUMMARY, CONCLUSION, AND RECOMMENDATIONS

#### 5.1 Introduction

This study sought to examine the effect of public procurement management practices on Public Procurement Price Variance in Government Agencies in Nairobi. This chapter presents the summary of Findings, Conclusions and recommendations of the study.

#### 5.2. Summary of Findings

The general objective of this study was to examine the effect of Public Procurement management practices on public procurement price variance in Government Agencies. The study was conceived on the backdrop of empirical and contextual literature indicating that government agencies procure at prices above market price. Extant empirical evidence seems not to explain the effect of procurement management practices on this phenomenon. The study, focused on four independent practices: Procurement Planning, Procurement Audit, E-Supply Chain Management, and Procurement Risk Management. The study observed through the Value for Money Framework that public procurement planning is its potential to facilitate market research and analysis of sourcing options. The study hypothesized that when public entities invest time in researching the market, they can align their procurement processes more closely with prevailing market prices. Further, through the stewardship Theory, the study expected that procurement audit as an accountability mechanism could enhance public procurement stewardship towards value for money, by monitoring price conformance.

Further, the study guided by the UTAUT, observed that e-supply chain management practices can serve as an effective strategy to combat issues such as overpricing, which often arise due to corrupt

activities tied to human interference. The Agency theory further guided this study to develop construct to examine the procurement risk management framework. The study observed that agency problems, such as collusion and undue influence, fluctuations in market conditions—whether competitive or monopolistic—inefficiencies within the procurement process, could lead to procurement price variance. Review of empirical research revealed that a gap exists in literature as extant empirical evidence does not explicitly provide explanation of the relationship between study variables of this study. Data was collected from 73 government agencies; and data analysis conducted. The following subsections provide a summary of the findings of the study.

### **5.2.1 Procurement planning and Public Procurement Price Variance.**

The study exposes a serious flaw in how Kenya manages public procurement planning. It finds that nearly half of public bodies responsible for buying goods and services do not base their planned costs on current market data. Instead, they often rely on guesses or outdated estimates, which results in procurement prices that are not aligned with real market values. This practice leads to inflated budgets, where the amounts allocated for projects or purchases are higher than they should be. As a result, public funds are not used efficiently, and taxpayers pay more than necessary for supplies and services. This system opens the door to corrupt practices, such as collusion among suppliers and officials, kickbacks, and other forms of financial misconduct because inflated budgets make it easier for dishonest parties to hide their gains. When procurement prices are based on erroneous estimates, it distorts fair competition. Genuine suppliers who offer fair prices struggle to compete against suppliers who benefit from inflated budgets and possible corrupt arrangements.

Kenya's laws, specifically the Public Procurement and Asset Disposal Act of 2015, clearly require that procurement costs be aligned with current market prices. The law aims to promote transparency and fairness in public contracts. However, many government entities ignore this rule, choosing instead to inflate their budgets deliberately. Some experts refer to this as "budgeted corruption," because it disguises illegal activities as part of normal budgeting processes. Such inflation allows corrupt officials and suppliers to share the extra money, while the government and taxpayers bear the financial cost. Empirical evidence from the study confirms that when public bodies conduct thorough market surveys, they significantly reduce the gap between planned and actual procurement prices. These surveys gather data on current prices from multiple suppliers, helping buyers set realistic budgets. When procurement costs reflect true market conditions, prices tend to be stable and predictable. This reduces the likelihood of inflated estimates and encourages fair competition among suppliers.

Enforcing the use of market-based prices is vital for reducing corruption. When prices are aligned with market data, there is less room for manipulation or kickbacks. Suppliers are motivated to bid honestly, knowing that prices will be checked against real market conditions. This creates a level playing field, giving genuine, fair-cost suppliers a chance to compete. It also ensures that public funds are used more efficiently, freeing up resources for other critical projects. It is clear that requiring procurement prices to be based on actual market surveys strengthens the integrity of public procurement. It helps prevent corruption, promotes fair competition, and leads to better stewardship of government funds. Strengthening oversight and enforcing the law can create a more transparent procurement system, where money is spent on what it should be—delivering value to the public.

### **5.2.2 Procurement Audit and Public Procurement Price Variance**

The study exposes critical gaps in Kenya's public procurement oversight, revealing that most government entities fail to establish dedicated procurement audit units despite legal requirements mandating proper management and compliance checks. Data shows that agencies rarely verify whether final payments align with contracted terms, including basic checks for volume discounts or invoice overcharges. This lack of price conformance audits leads to significant fiscal leakage, with unverified payments resulting in substantial taxpayer losses. Notably, price conformance audits—when implemented—have been proven to substantially reduce procurement price variance. However, compliance remains alarmingly low, even though procurement laws explicitly require accounting officers to ensure fair, market-aligned pricing and mandate regulatory oversight. Empirical evidence confirms that systematic audits enhance accountability by enforcing contract adherence, securing value-for-money, and deterring procurement abuses.

The findings highlight a pressing need for clear and decisive policies to improve how public procurement is managed. One effective step would be to make conformance audits mandatory for all procurement processes. These audits would check whether suppliers and contractors follow established rules and standards. For example, by reviewing contracts regularly, authorities can catch violations that might otherwise go unnoticed. This approach would help stop companies from winning contracts through illegal practices or false claims. It would also reduce cases where prices for goods and services are pushed higher than they should be. Inflated contract prices drain public funds and waste taxpayer money. When good oversight is in place, it becomes harder for corruption to flourish. Transparency increases when information about how contracts are awarded and paid is publicly available. This discourages dishonest behavior and leads to fairer competition.

Without these reforms, the system remains open to abuse. Price differences will keep widening due to weak controls and inaccurate cost estimates. Public agencies will struggle to manage their budgets effectively, increasing the risk of financial mismanagement. In turn, this reduces public trust in government efforts and hinders economic growth.

Strengthening oversight through mandatory audits creates a more open, efficient, and accountable procurement system. It ensures that resources serve the public interest, not individual gains. This shift is essential to cut down on unnecessary expenses and to restore confidence in public spending. If reforms are ignored, unchecked price variances and lax oversight will continue to undermine efforts to spend public money wisely. This environment paves the way for corrupt practices to take root. Overall, making conformance audits mandatory is a key step to fix systemic problems. It can make procurement more transparent, fair, and cost-effective. This, in turn, will lead to better management of public funds and help prevent corruption before it takes hold.

### **5.2.3 E-Supply Chain Management and Public Procurement Price Variance**

The study reveals a concerning lag in the adoption of digital technologies within Kenya's public procurement processes, representing a missed opportunity to achieve greater efficiency and cost control. While evidence demonstrates that e-procurement systems can significantly streamline operations—reducing cycle times, improving supplier communication, enhancing record-keeping, and increasing price visibility—most government agencies have yet to fully embrace these tools. This reluctance perpetuates inefficiencies and undermines the potential benefits of digital transformation. The research establishes a direct correlation between digitization and reduced procurement price variance. As agencies implement digital solutions, they gain improved transparency and pricing visibility, enabling better price comparisons and trend monitoring.

This increased oversight promotes greater price conformance among suppliers, minimizing discrepancies and leading to more predictable procurement costs. The findings underscore digitization's dual role: not only does it optimize operational efficiency, but it also serves as a powerful mechanism for cost containment. However, the persistent resistance to digital adoption poses a strategic risk, leaving procurement systems vulnerable to inefficiencies and inflated costs. Accelerating the integration of e-procurement technologies should therefore be prioritized as a key reform to enhance transparency, accountability, and fiscal discipline in public procurement.

#### **5.2.4 Procurement Risk Management and Public Procurement Price Variance**

The study reveals a critical paradox in Kenya's public procurement system: while competitive bidding has proven effective in controlling price inflation and reducing procurement price variance, public entities persistently rely on non-competitive methods. This widespread preference for direct procurement, restricted tendering, and single-sourcing creates systemic vulnerabilities that drive overpricing by removing market-driven price controls. Non-competitive procurement methods fundamentally undermine price discovery mechanisms, allowing suppliers to dictate inflated prices without market pressure. This environment fosters corruption and favoritism, as suppliers can artificially inflate costs with confidence that their bids won't face competitive scrutiny. The absence of transparent bidding processes exacerbates the problem, as procurement entities lack access to real-time market data to verify pricing fairness.

The research shows that when procurement processes are not competitive, it creates a dangerous environment for price fixing. Without competition, suppliers have less reason to offer fair prices, giving them room to charge more than necessary. When rules are relaxed or exemptions are granted easily, it becomes easier for companies to manipulate prices without facing much challenge. This

situation becomes worse when regulators lack strong tools to hold vendors accountable. If there are no strict rules or penalties, companies can inflate their prices freely. Limited transparency into prices also plays a role. When the public or government officials do not have access to clear information about what prices are fair, it becomes easy for abuse to go unnoticed. This combination of weak oversight, lack of competition, and hidden prices creates a perfect storm for high prices. Excessive costs drain public funds and reduce the value of taxpayer money. It also damages trust in government spending. Citizens become skeptical when they see money spent on inflated contracts or suspicious deals. The evidence points to a clear need for policy change. Strengthening rules that require open bidding and removing unnecessary exemptions can make a difference. Such reforms would make it harder for inflated prices to hide and easier to catch manipulation.

They would also encourage companies to offer better prices, knowing competition is real and transparent. If Kenya does not act now, its procurement system will likely keep suffering. It will continue to face higher costs that strain public budgets. Corruption and favoritism could grow worse as there are fewer barriers to unfair practices. Addressing these issues is crucial for building a fair and efficient system that benefits everyone. Proper reforms can improve transparency, lower costs, and restore confidence among citizens and businesses.

### **5.3 Conclusions**

Based on these findings, the study concludes as follows:

#### **5.3.1 Procurement planning and Public Procurement Price Variance.**

This study reveals critical systemic deficiencies in Kenya's public procurement framework, demonstrating that approximately 50% of government agencies establish procurement prices without empirical market data. Such practice constitutes a fundamental violation of sound

procurement principles, resulting in artificial price inflation, inefficient resource allocation, and compromised fiscal discipline. The findings indicate that market-disconnected pricing not only facilitates rent-seeking behavior but actively undermines competition by rewarding suppliers who exploit informational asymmetries rather than those offering genuine value. The analysis confirms that market-based procurement planning significantly reduces price variance, establishing it as an essential control mechanism against cost manipulation.

However, persistent non-compliance with existing regulatory requirements—particularly the mandatory use of Market Price Indices—suggests institutionalized resistance to transparency. This deliberate circumvention of oversight mechanisms points to structural governance failures that enable budgeted corruption through inflated cost estimates. These findings carry substantial policy implications. First, they underscore the necessity of institutionalizing market surveys as a mandatory component of procurement planning. Second, they highlight the urgent need for enhanced monitoring mechanisms to enforce existing price compliance regulations. Third, they demonstrate that procurement officer training must emphasize market-based cost estimation techniques to improve planning accuracy.

This study provides empirical evidence that market-informed procurement planning serves as both an efficiency measure and an anti-corruption tool. The documented correlation between market data utilization and reduced price variance offers a clear pathway for procurement reform. Without systemic adoption of these evidence-based practices, Kenya's public procurement system will continue to serve as a conduit for resource leakage rather than value optimization.

### **5.3.2 Procurement Audit and Public Procurement Price Variance**

This study reveals significant institutional weaknesses in Kenya's public procurement oversight framework, particularly regarding the absence of dedicated procurement audit functions in most government entities. The findings demonstrate a troubling disconnect between legal requirements under the Public Procurement and Asset Disposal Act (2015) and actual practice, with systematic failures to verify price conformance against contractual terms. Such oversight gaps create substantial fiscal vulnerabilities, including undetected overcharges, unclaimed volume discounts, and unchecked invoice discrepancies. The empirical evidence establishes that regular procurement audits, particularly those focusing on price conformance, serve as a powerful mechanism for reducing procurement price variance. These audits provide essential accountability checks that: (1) validate contract compliance, (2) ensure market-aligned pricing, and (3) detect potential overpricing patterns. The demonstrated effectiveness of such audits highlights their dual role as both financial safeguards and anti-corruption tools.

Three critical policy implications emerge from these findings. First, there is an urgent need to institutionalize procurement audit units across all government entities, with specific mandates for price verification. Second, accounting officers must be held directly accountable for implementing regular conformance audits as required by existing legislation. Third, audit processes should incorporate real-time market price monitoring to enhance detection capabilities. The persistent non-compliance with audit requirements suggests deeper systemic issues in procurement governance that require structural reforms.

### **5.3.3 E-Supply Chain Management and Public Procurement Price Variance**

This study underscores a critical gap in Kenya's public procurement system: the persistent underutilization of digital technologies despite their demonstrated potential to enhance efficiency, transparency, and cost-effectiveness. The findings reveal that government agencies continue to rely on manual processes, foregoing the substantial benefits of digitization, including streamlined operations, improved supplier communication, enhanced record-keeping, and greater price visibility. Empirical evidence from the study establishes a clear correlation between digital adoption and reduced procurement price variance. As agencies implement e-procurement systems, they achieve greater pricing transparency, enabling more accurate cost comparisons and stronger supplier compliance with market rates. This digital transformation not only optimizes operational efficiency but also serves as a powerful tool for fiscal control, minimizing opportunities for price manipulation and overpricing.

The implications of these findings are significant. First, they highlight the urgent need for policy interventions to accelerate digital adoption across public procurement entities. Second, they demonstrate that digitization acts as both a performance enhancer and an accountability mechanism, addressing two key challenges in public procurement: inefficiency and price volatility. Third, they provide a compelling case for investing in the technological capacity of procurement teams to ensure effective system utilization.

### **5.3.4 Procurement Risk Management and Public Procurement Price Variance**

This study reveals a fundamental contradiction at the heart of Kenya's public procurement system. While competitive bidding has proven its effectiveness in controlling price inflation and reducing procurement variances, the findings demonstrate an institutional preference for non-competitive

methods that undermines these benefits. The widespread reliance on direct procurement and restricted tendering creates systemic vulnerabilities that distort pricing mechanisms and compromise fiscal discipline. The analysis pushes the argument that non-competitive procurement environments produce three interlinked negative outcomes that collectively erode procurement integrity. It is perceived that they eliminate the market discipline of competitive bidding, allowing artificial price inflation to flourish unchecked. Second, they create governance gaps where favoritism and supplier collusion can thrive without the scrutiny imposed by open competition.

Third, they reduce pricing transparency to critical levels, leaving procurement entities without reliable benchmarks to verify cost reasonableness. These findings carry significant implications for procurement reform. The demonstrated effectiveness of competitive processes suggests they should become the default approach rather than the exception in public procurement. Current practices that permit widespread use of non-competitive methods require urgent review, particularly the criteria for granting exemptions. Furthermore, the study highlights the need for complementary measures to strengthen price verification and enhance oversight even in legitimate cases where non-competitive procurement may be necessary. The persistence of these problematic procurement patterns despite their documented risks points to deeper institutional challenges that merit further investigation.

#### **5.4. Recommendations**

The study based on findings and conclusions, makes various recommendations to improve public procurement performance. The recommendations are discussed as follows:

#### **5.4.1 Recommendation to Stakeholders of Public Procurement**

The findings of this study point to several concrete measures that can strengthen Kenya's public procurement system. For procurement practitioners, the evidence underscores the critical importance of institutionalizing market-based pricing mechanisms. This requires moving beyond ad hoc market surveys to establishing systematic processes for collecting and analyzing price data, ensuring all procurement plans are grounded in current market realities. The demonstrated effectiveness of price conformance audits suggests practitioners should prioritize developing in-house audit capacity, with particular emphasis on verifying contract compliance and detecting pricing anomalies. At an institutional level, government agencies need to re-examine their overreliance on non-competitive procurement methods. The study's findings indicate that competitive bidding should be the default approach, with exceptions granted only under strictly defined and monitored circumstances.

Digital transformation of procurement processes emerges as another key priority, with e-procurement systems offering solutions to both efficiency challenges and transparency gaps. Implementation should focus first on high-value procurement categories where the potential for savings and fraud prevention is greatest. For policymakers and public sector managers, the study highlights the need for stronger compliance mechanisms to enforce existing regulations. This could involve linking budget approvals to demonstrated adherence to market-based pricing and competitive procurement standards. Capacity building initiatives should target both technical skills - particularly in market analysis and digital procurement tools - and ethical competencies to reinforce professional standards

### 5.4.2 Further Research

The study, based on study conclusions, recommends several critical research priorities emerge that demand scholarly attention: First, the persistent gap between regulatory requirements and actual procurement practices warrants systematic investigation. Future studies should examine the institutional and behavioral factors that enable agencies to circumvent mandated market-based pricing and audit processes, despite clear evidence of their effectiveness. This research should particularly explore whether this implementation gap stems from capacity constraints, political interference, or weaknesses in enforcement mechanisms. Second, the relationship between procurement methods and pricing outcomes requires deeper analysis. While this study establishes that non-competitive methods correlate with price inflation, research should identify the specific mechanisms through which restricted tendering and direct procurement enable cost manipulation. This should include case studies comparing pricing outcomes for similar procurements conducted through competitive versus non-competitive processes.

Third, the study's finding that digital procurement reduces price variance suggests the need for implementation research. Future work should identify the most effective digital tools for price monitoring and analyze the organizational changes required for successful e-procurement adoption. This research should pay particular attention to overcoming resistance to technological transition in public sector contexts. Fourth, the demonstrated benefits of market-based pricing and audits point to necessary research on scaling these practices. Studies should develop and test frameworks for implementing market surveys and price audits to support actualization of legal Requirements. Research should analyze why evidence-based improvements face adoption barriers,

examining the interests and incentives that maintain suboptimal practices despite their demonstrated costs.



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## Appendix I: Questionnaire

### Data Collection Guide

#### A: Market Survey

Sn	Item	Prevailing Market Price (2023/2024)

#### B: Data from MDAs

Sn	Item	Procurement Prices (2023/2024)

#### C: Data from Respondents

##### A. Demographic

- a) Position in the organization. ....
- b) Number of Years you have worked in the Supply Chain Function. ....

##### B. Procurement Planning

- c) What informs the price estimates in the procurement plan
  - i. Market Price Indices provided by PPRA
  - ii. Market survey (Field or Desktop Research)
  - iii. Estimates based on Previous Years Procurement Plans.

##### C. Procurement Audit

- d) Is there a fully-fledged procurement audit section in the procurement division?
  - i. Yes
  - ii. No
- e) At what instances is the audit of procurement process conducted?

- i. Audit of the Procurement Plan
- ii. Pre-contract Audit
- iii. During Contract Administration
- iv. Post Contract Execution
- v. when integrity issues are raised

#### D. E-Supply Chain Management

- f) Which of the following E-Procurement tools are used in the organization?
  - i. IFMIS
  - ii. AI embedded Software
- g) Which of the following processes are conducted electronically?
  - i. Procurement planning
  - ii. Requisition processing
  - iii. Advertisement & Bid processing
  - iv. Payment processing
  - v. Documentation management
  - vi. Supplier communication

#### E. Procurement Risk Management

- h) What are some of the procurement risks related to price that most affect the organization?
  - i. Inflation
  - ii. Currency exchange volatility
  - iii. Price transparency-Hidden fees, unfair pricing strategy, and collusion.
  - iv. Predatory Pricing
- i) What Procurement risk management strategies does the entity employ to manage these risks?
  - i. Supplier Diversification
  - ii. Competitive Bidding

## Appendix II: Sample Letter of Consent

### To Respondents

#### RE: Informed Consent for Data Collection

This study seeks to examine the effect of Public Procurement Management Practices on Public Procurement Price Variance in Government Agencies in Nairobi, Kenya. This study is a prerequisite, and requirement for the award of a Master degree in Procurement and Supplies of Mt Kenya University.

Therefore, your participation is essential in the successful completion of the research study, and completion of my academic journey. The study findings will also be important in providing empirical recommendations on management of overpricing in public procurement.

Data sought is therefore for academic purposes, and will be anonymously collected, and reported; while processing will be as per university academic policy-that safeguards the provider of the data sought.

This is to therefore seek your consent in filling this study by appending your signature below. For further information please reach me on: 0725707707.

#### CONSENT

I have read and understood this form and got the opportunity to ask questions. I agree to participate in this study without coercion.

Respondent's Signature..... Date.....

## Appendix III: Introduction Letter



### DIRECTORATE OF GRADUATE STUDIES

MPSM/2015/25172

3<sup>rd</sup> April, 2025

*National Commission for Science Technology & Innovation (NACOSTI)  
Off Waiyaki Way, Upper Kabete,  
P.O Box 30623- 00100  
NAIROBI, KENYA*

Dear Sir/Madam,


**RE: MOHAMED ISSACK HASSAN – REGISTRATION NO. MPSM/2015/25172**

The purpose of this letter is to introduce the above named student who is pursuing **Master of Science in Procurement and Supplies Management** in the **Department of Management** in the school of **Business and Economics**

The title of the research is **“Public Procurement Management Practices and Public Procurement Price Variance in Ministries, Departments, and Agencies (MDAs) in Nairobi Kenya”**. It has been cleared by the University’s Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **April, 2025 and June, 2025**.


Any assistance accorded to the student will be highly appreciated.

Thank you.

  
**Dr. Samuel M. Karenga, Ph.D.**  
**Director, Graduate Studies**  
Enc.


**Mount Kenya University**  
P.O. Box 342 - 01000, THIKA  
Office of the Director,  
Graduate Studies

# Appendix IV: License

  
**REPUBLIC OF KENYA**

**Ref No: 759504**

**RESEARCH LICENSE**




**This is to Certify that Mr. MOHAMED ISSACK HASSAN of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: PUBLIC PROCUREMENT MANAGEMENT PRACTICES AND PUBLIC PROCUREMENT PRICE VARIANCE IN GOVERNMENT AGENCIES IN NAIROBI, KENYA. for the period ending : 14/April/2026.**

**License No: NACOSTI/P/25/418151**

**759504**  
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## Appendix V: Plagiarism Report

# Mohamed Hassan Project Final

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*by* Mohamed Hassan

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