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Evaluating the effect of procurement practices on supplier compliance risk levels for commercial banks in Kenya.

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EVALUATING THE EFFECT OF PROCUREMENT PRACTICES ON SUPPLIER COMPLIANCE RISK LEVELS FOR COMMERCIAL BANKS IN KENYA

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DECLARATION

I hereby declare that this work has not been previously submitted for the award of a degree at this or any other university. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person, except where proper citation is made within the dissertation itself.

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ABSTRACT

Organizations are increasingly relying on external suppliers and third-party vendors for various services, including information technology, operations, and professional services. This has in turn posed a supplier risk to organizations, when they fail to manage supplier risks adequately leading to operational disruptions, data breaches, financial losses, and reputational damage, posing significant threats to stability and industry resilience. This study evaluates the effect procurement practices have on supplier compliance risk levels for Commercial Banks in Kenya. The study focused on three key aspects of procurement practices: Procurement planning, purchasing process and Contract management, while also examining bank size as a potential moderating variable. The research was guided by three specific objectives, each examining the effect of a particular procurement practice in managing supplier compliance risk levels in Commercial Banks in Kenya, with a fourth objective exploring the moderating effect of bank size. The theoretical framework was underpinned by the Risk Management Theory, Principal-Agent Theory and Transaction Cost Economics Theory, providing a comprehensive lens for analysis. Adopting a positivist philosophy and an explanatory research design, the study targeted Procurement Managers from thirty-eight Commercial Banks in Kenya. A census approach was adopted and included all the 38 commercial banks in Kenya, with 30 banks responding. Data collection employed questionnaires for quantitative data, with the study using both online and physical surveys to accommodate various work arrangements. Data analysis was conducted using SPSS, employing descriptive and inferential statistics, including regression and correlation analyses. Correlation tests found a strong positive correlation between procurement planning and supplier compliance risk levels ($r=0.855$, $p=0.000$) and moderate positive correlations between purchasing processes ($r=0.668$, $p=0.000$) and contract management ($r=0.672$, $p=0.000$) with supplier compliance risk levels. Regression analysis indicated that procurement planning had the strongest effect, explaining 73.1% of variance in supplier compliance risk levels. Purchasing processes and contract management showed moderate effects, explaining 44.6% and 45.2% of variance respectively. The combined model explained 74.3% of variance in supplier compliance risk levels. Hierarchical regression analysis revealed that bank size significantly moderates the relationship between procurement practices and supplier compliance risk levels. The model with interaction terms explained 81.1% of variance, with the strongest moderation effect observed for purchasing processes ($\beta=0.373$, $p=0.000$). The findings indicate that the positive effects of procurement practices on supplier compliance risk levels are amplified in smaller banks, suggesting that organizational context plays a crucial role in determining the effectiveness of procurement practices. In conclusion, the study established that procurement practices play a crucial role in managing supplier compliance risk levels in Kenyan commercial banks, with procurement planning emerging as the most influential factor.

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ABBREVIATIONS

CBK - Central Bank of Kenya

HPWS - High-Performance Work Systems

NACOSTI - National Commission for Science, Technology and Innovation

SCRM - Supplier Compliance Risk Management

SPSS - Statistical Package for Social Sciences

DEFINITION OF TERMS

Compliance risk: Compliance risk refers to the potential for legal, financial, or reputational damage that an organization faces if it fails to adhere to industry laws, regulations, and standards. This risk arises when business practices do not comply with the required guidelines, leading to possible penalties, fines, legal action, and loss of trust among. (Krepysheva,et al., 2020).

Compliance Risk Levels: Compliance risk levels indicate the degree of risk related to regulatory, contractual, and ethical compliance, with effective SRM practices aiming to minimize these risks. (Ghadge et al., 2019).

Supplier Compliance Risk Management (SCRM): SCRM refers to practices that help organizations identify, assess, and mitigate risks in their supplier relationships to ensure that the supplier risk levels are controlled and reported to minimize supplier disruptions and financial losses (Bai & Sarkis, 2020).

Purchasing process: The purchasing process involve activities like supplier selection, contract negotiation, and performance monitoring, essential for managing supplier compliance risks and achieving strategic goals as part of the Procurement practices. (Ghadge et al., 2017).

Procurement Planning: Procurement planning aligns procurement activities (need identification, market analysis, supplier identification) with organizational goals, involving risk assessment, performance metrics, and strategies for managing supplier relationships (Villena, 2019).

Contract Management: Contract management is the process of managing legally binding agreements including activities such as: negotiation, creation, compliance to regulatory terms and conditions, performance management, renewals and close outs Morris and Pinto, 2007). Effective contract management aims at enhancing financial and operational performance, while mitigating risks (Uher and Davenport, 2007).

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter introduces the research study by providing background information on supplier compliance risk management in commercial banks, outlining the research problem, stating the study objectives and research questions, defining the scope, and explaining the significance of the study. The chapter establishes the context for examining how procurement practices influence supplier compliance risk levels in Kenya's commercial banking sector.

1.1 Background of the Study

Effective enterprise risk management is crucial for organizational continuity and achievement of strategic objectives in today's volatile business environment (Chen et al., 2020). As markets become increasingly uncertain, structured risk management approaches have become essential not only for identifying potential threats but also for minimizing their negative impacts on organizational objectives (Rezapour et al., 2018). These frameworks foster continuous improvement while providing competitive advantages in dynamic markets (Alves & Lima, 2021). The evolution of supply chain relationships has fundamentally transformed organizational risk profiles. Modern enterprises increasingly depend on third-party suppliers for critical goods, services, and specialized solutions, creating complex interdependencies that require sophisticated management approaches (Nitzl et al., 2016). These interconnected supply networks introduce vulnerabilities that, if not properly managed, can result in cascading failures affecting multiple organizational functions (Ghadge et al., 2019).

Supplier compliance risk has emerged as a particularly significant concern within this evolving risk landscape. This risk category refers to the potential financial losses, operational disruptions, regulatory penalties, and reputational damage that may occur when suppliers fail to adhere to applicable laws, regulatory requirements, internal policies, and industry standards (Can Saglam et al., 2020). Unlike more general supply chain risks, compliance risks specifically involve violations of established rules and standards that may trigger legal consequences, regulatory scrutiny, or breach of stakeholder trust.

The severity of supplier compliance risks varies significantly based on supplier criticality and exposure levels. Organizations typically implement tiered supplier classification systems to facilitate risk-appropriate management approaches (Gualandris et al., 2018). Mission-critical suppliers pose very high inherent risks to strategy, security, and operations due to their direct

impact on core business functions. Vital suppliers with access to customer data create high dependency risks through their handling of sensitive information. Important suppliers present medium risks through limited access to operational systems, while minor suppliers generally pose minimal operational risks (Bai & Sarkis, 2020).

The banking industry faces unique supplier compliance challenges due to its heavily regulated operating environment. Financial institutions operate under particularly stringent regulatory frameworks designed to ensure system stability, protect customer assets, and maintain market integrity (Choudhry, 2018). Kenya's thirty-eight commercial banks function under the Central Bank of Kenya's (CBK) oversight, which has established comprehensive prudential guidelines specifically addressing supplier and third-party risk management (Chege, 2017). These regulatory frameworks establish minimum standards that individual banks must incorporate into their internal policies. Procurement departments typically assume primary responsibility for supplier management and compliance monitoring within this regulatory context, implementing the controls necessary to satisfy both internal governance requirements and external regulatory expectations (CBK, 2021).

Procurement planning serves as the foundation for effective supplier compliance risk management. This foundational practice enables organizations to systematically identify needs, develop appropriate strategies, and implement risk assessment frameworks before supplier engagement begins (Gopal & Cline, 2007). Research has consistently demonstrated that organizations with well-developed procurement planning capabilities exhibit superior resilience against supplier-related disruptions and compliance failures (Aloini et al., 2012). Studies across various industries have found that comprehensive planning reduces compliance violations by approximately 45% while significantly enhancing response capabilities when incidents occur (Matunga et al., 2021; Akinradewo et al., 2022).

The purchasing process translates procurement planning into operational reality through structured implementation activities. This critical phase involves supplier selection, due diligence, contract negotiation, and initial performance baseline establishment (Sta, 2018). Effective purchasing processes incorporate rigorous evaluation mechanisms that assess not only commercial terms but also compliance capabilities and risk profiles. Research conducted by Wawire (2022) demonstrated that financial institutions implementing standardized purchasing processes experienced a 40% reduction in supplier-related incidents and significantly improved their detection of emerging risks through enhanced monitoring capabilities.

Contract management completes the procurement cycle by ensuring ongoing compliance throughout the supplier relationship lifecycle. This practice involves systematic tracking of contractual obligations, performance milestones, and compliance indicators to maintain alignment with organizational requirements (Uher & Davenport, 2007). Studies by Jajja et al. (2019) found that organizations with robust contract management frameworks experienced a 55% reduction in compliance violations and a 40% improvement in regulatory reporting quality compared to those with less developed practices.

The Kenyan banking sector has experienced unique challenges in supplier compliance risk management due to its rapid technological evolution and expanding reliance on external providers. The sector's growth has created increased dependencies on technology providers, outsourced services, and specialized solutions that introduce complex risk dimensions (Barnes et al., 2021). Recent studies have documented operational disruptions and data breaches involving third-party service providers, highlighting the critical importance of tailored risk management approaches that address the specific characteristics of the banking environment (Ouma et al., 2024). Despite the recognized importance of supplier compliance risk management, implementation challenges persist within the Kenyan banking sector. These include complexities in procurement planning, difficulties standardizing processes across diverse supplier categories, and challenges maintaining effective oversight throughout extended supplier relationships (Mwanzia, 2021; Gilbert, 2021). The dynamic nature of financial services regulation requires continuous evolution of procurement practices to address emerging risks and changing compliance expectations (Aluda, 2015).

Organizations that successfully integrate the three key procurement functions—planning, purchasing, and contract management—demonstrate enhanced ability to mitigate supplier compliance risks and maintain operational resilience (Simangunsong et al., 2018). These integrated approaches require sufficient resources and organizational commitment to be effective throughout the supplier relationship lifecycle (Ghadge et al., 2017; Panontongan, 2017). This study therefore evaluates how procurement practices influence supplier compliance risk levels in Kenyan commercial banks, providing insights that can strengthen risk management capabilities within this critical economic sector.

1.2 Statement of the Problem

Kenya's financial sector faces significant challenges in managing supplier compliance risks, particularly within the commercial banking industry. The Kenya Financial Stability Report

(2023) documented a substantial increase in operational disruptions, with technology-related incidents including supplier breaches rising by 27% between 2019-2021. The Central Bank of Kenya's Annual Supervision Report (2021) further highlighted that 32% of these incidents resulted in data breaches and 18% caused service disruptions, demonstrating the critical importance of effective supplier compliance risk management. Despite the growing severity of these challenges, there exist significant gaps in both theoretical understanding and practical implementation of supplier compliance risk management within Kenya's commercial banking sector. These gaps can be categorized into three distinct areas that this study seeks to address: theoretical gaps in the literature, contextual gaps in regional applicability, and methodological gaps in research approaches.

From a theoretical perspective, existing research has primarily approached supplier risk management from general supply chain management perspectives rather than through procurement-specific lenses. While scholars such as Ghadge et al. (2017) and Zimmer et al. (2016) have developed frameworks for supplier risk assessment, these studies have not explicitly connected procurement practices to compliance risk outcomes. Sadiqeen et al. (2023) examined strategic procurement in commercial banks but focused exclusively on operational performance rather than risk mitigation. Similarly, Anane et al. (2019) investigated procurement policy effects in public utilities without addressing compliance dimensions. These theoretical limitations have created a significant knowledge gap regarding how specific procurement mechanisms influence compliance risk management outcomes.

The contextual gap in existing research is particularly pronounced when examining the applicability of global findings to Kenya's unique banking environment. Studies by Seipp et al. (2020) examined banking regulations across Asia, the US, and EU markets but explicitly excluded African contexts. Jajja et al. (2019) investigated buyer-supplier relationships in emerging markets but did not include East African banking institutions within their sample. This contextual limitation is significant because, as noted by Nyasulu (2018), procurement functions in different regions operate under distinct regulatory regimes that substantially influence their implementation approaches. The absence of Kenya-specific procurement research creates a critical knowledge gap, as findings from other markets may not adequately address the unique regulatory, infrastructural, and institutional characteristics of Kenya's banking sector.

Methodological gaps further limit the applicability of existing research to the Kenyan commercial banking sector. While Wawire (2022) identified significant weaknesses in supplier

monitoring systems within Kenyan public institutions, this research focused exclusively on county governments rather than financial institutions. The regulatory environments, operational requirements, and risk profiles of these sectors differ substantially, creating a methodological gap in understanding sector-specific procurement impacts. Similarly, Maundu's (2022) investigation of risk management technologies in Kenyan banks concentrated primarily on internal controls rather than extending to supplier-related risks. This narrow methodological focus has resulted in limited understanding of how procurement practices specifically influence supplier compliance risk levels within Kenya's unique banking context.

From a practical perspective, these research gaps have translated into significant implementation challenges. A comprehensive survey by Deloitte (2022) revealed that only 38% of financial institutions in Kenya have well-defined supplier risk management programs, compared to a global financial industry average of 67% (McKinsey & Company, 2022). The same survey found that 42% of Kenyan financial institutions face significant challenges implementing robust procurement controls, while 53% of commercial banks lack comprehensive contract management frameworks specifically designed for supplier risk mitigation. According to CBK data (2023), these deficiencies have resulted in financial losses exceeding KES 2.8 billion between 2020-2023 due to supplier-related compliance breaches, with 65% of these incidents attributed to inadequate procurement controls.

Several scholars have highlighted the need for industry-specific procurement risk research. Kusrini and Hanim (2021) emphasized that standardized procurement approaches often fail when applied across different sectors without adaptation to specific regulatory requirements. Similarly, Leppänen (2024) argued that procurement practices must be tailored to industry-specific compliance regimes to effectively mitigate supplier risks. Within the Kenyan context specifically, both Gilbert (2021) and Mwanzia (2021) have acknowledged the importance of risk management in banking but noted the absence of comprehensive research examining how procurement practices influence supplier compliance risk levels. This study addresses these theoretical, contextual, and methodological gaps by examining how specific procurement practices—planning, purchasing processes, and contract management—influence supplier compliance risk levels in Kenyan commercial banks.

1.3 Objectives of the Study

1.3.1 General Objective

The purpose of this research study was to evaluate the effect of procurement practices on supplier compliance risk levels in Commercial Banks in Kenya.

1.3.2 Specific Objectives

i. To examine how procurement planning affects supplier compliance risk levels for Commercial Banks in Kenya
ii. To assess how purchasing process influences supplier compliance risk levels for Commercial Banks in Kenya
iii. To evaluate how contract management practices, affect supplier compliance risk levels for Commercial Banks in Kenya.

1.4 Research Questions

The main question was to what extent do these procurement practices collectively contribute to the overall stability and risk management effectiveness of Commercial Banks in Kenya?

The other questions include:

i. To what extent does procurement planning affect supplier compliance risk levels for Commercial Banks in Kenya within the context of CBK's prudential guidelines?
ii. How does the purchasing process influence supplier compliance risk levels for Commercial Banks in Kenya, and to what extent does it comply with regulatory requirements?
iii. What effect do contract management practices have on supplier compliance risk levels for Commercial Banks in Kenya?

1.5 Scope of the study

The study assessed the effect of procurement practices on supplier compliance risk levels for Commercial Banks in Kenya. The target population comprises all thirty-eight (38) commercial banks licensed and regulated by the Central Bank of Kenya to offer banking services as of December 2023. The study examined three key independent variables - procurement planning, purchasing process, and contract management - and their effect on the dependent variable of supplier compliance risk levels. The research was conducted over a period of two months, from November to December 2024, focusing on how these procurement practices influence supplier

compliance risk management within Kenya's commercial banking sector. A comprehensive list of all banks included in this study is provided in Appendix III.

1.6 Significance of the study

This study offers value to various stakeholders in Kenya's financial ecosystem by establishing clear connections between procurement practices and supplier compliance risk management, addressing a critical gap in both theory and practical application.

For regulatory authorities, particularly the Central Bank of Kenya (CBK), this research provides empirical evidence on how procurement practices directly impact supplier compliance risk levels. These insights will inform future policy amendments and prudential guidelines, enabling regulators to develop more targeted supervision frameworks. By understanding the causal relationships between specific procurement practices and risk outcomes, regulators can create more effective compliance mechanisms tailored to the banking sector's unique operational environment.

Commercial banks will gain substantial practical benefits through enhanced understanding of the direct correlation between procurement practices and risk mitigation. The study specifically identifies how procurement planning, purchasing processes, and contract management contribute to risk reduction, allowing banks to prioritize interventions that yield the greatest risk management returns. These insights will help banks strengthen their risk management frameworks, improve procurement policies, and develop more robust supplier evaluation systems while maintaining operational efficiency.

The academic community will benefit from evidence-based research that bridges theoretical concepts of procurement and practical risk management outcomes in the banking sector. This research provides a much-needed empirical foundation that connects procurement theory with real-world risk management challenges, contributing significantly to curriculum development in procurement and supply chain management programs. The findings establish a foundation for further research in the evolving field of procurement risk management.

Industry professionals will gain practical insights into the specific requirements and challenges of managing supplier risks in the banking sector. The study identifies precise procurement mechanisms that effectively mitigate compliance risks, informing professional development programs and training curricula. This knowledge will help practitioners better understand and implement the intersection of procurement practices and organizational risk management in the banking context.

The broader economy and society benefit from this research through its contribution to financial sector stability. By identifying effective procurement practices that mitigate supplier risks, the study helps prevent operational disruptions that could affect banking services. Improved supplier compliance management reduces operational losses, enhances banking sector efficiency, and strengthens the resilience of Kenya's financial sector, ultimately supporting economic stability and public confidence in the banking system.

Policy makers will find significant value in the study's detailed analysis of how specific procurement practices impact risk levels. This understanding enables more targeted policy formulation addressing the root causes of supplier compliance failures. The research will influence the development of industry standards and guidelines for procurement practices by providing evidence-based insights into the critical link between procurement mechanisms and risk management outcomes.

1.7 Chapter Summary

This chapter introduced the key concepts of the study and provided background information on supplier compliance risk management in commercial banks. It articulated the problem statement, highlighting the critical challenges in managing supplier compliance risks within Kenya's banking sector. The chapter outlined the research objectives and questions focused on examining how procurement practices influence supplier compliance risk levels. The scope of the study was defined, encompassing all 38 commercial banks in Kenya, while the significance section detailed how various stakeholders, from regulators to practitioners, benefited from the research findings. The next chapter presents a comprehensive review of relevant literature, theoretical foundations, and empirical studies that inform this research, culminating in the identification of knowledge gaps and the study's conceptual framework.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a systematic review of literature relevant to procurement practices and supplier compliance risk management in commercial banks. The review begins with a comprehensive theoretical foundation that examines the Risk Management Theory, Principal-Agent Theory and Transaction Cost Economics theory which underpin this study. A critical analysis of empirical literature follows, synthesizing key findings from previous research on procurement planning, purchasing processes, and contract management, and their relationship with supplier compliance risk levels. The chapter then identifies significant research gaps in current literature, particularly within the context of Kenya's commercial banking sector. Finally, a conceptual framework is developed to illustrate the hypothesized relationships between the study variables, establishing clear linkages between procurement practices and supplier compliance risk levels. This structured approach ensures a thorough examination of existing knowledge while highlighting areas requiring further investigation.

2.2 Conceptual Literature Review

2.2.1 Procurement Planning

Procurement planning represents the strategic foundation of effective procurement management. It involves systematically identifying organizational needs, developing acquisition strategies, establishing evaluation criteria, and implementing risk frameworks (Weigel & Ruecker, 2017). This planning phase establishes parameters that guide subsequent procurement activities throughout the supplier relationship lifecycle.

Effective procurement planning incorporates several critical components. First, needs assessment analyzes organizational requirements and translates them into procurement specifications (Beske-Janssen et al., 2023). Second, market analysis evaluates supplier landscapes to identify potential partners (Burt & Pinkerton, 2006). Third, strategy development establishes approaches for supplier engagement, including sourcing methods and performance metrics (Wiengarten et al., 2016). Finally, risk planning identifies potential threats and develops mitigation strategies before supplier engagement begins (Bai & Sarkis, 2020). In banking institutions, procurement planning must incorporate compliance parameters into planning processes, establishing clear risk thresholds and monitoring frameworks that satisfy both operational and regulatory requirements (Barnes et al., 2021).

2.2.2 Purchasing Process

The purchasing process represents the operational execution of procurement planning. This process typically includes requirements specification, supplier identification, evaluation, selection, and contracting (Emrouznejad et al., 2023). The effectiveness of purchasing processes significantly influences organizational performance, cost efficiency, and risk exposure. In commercial banks, purchasing processes have specialized characteristics. Due diligence procedures must be rigorous, incorporating assessments of supplier financial stability, regulatory compliance history, and information security controls (Sufian et al., 2012). Evaluation frameworks must balance multiple criteria beyond cost, including compliance capabilities and alignment with banking regulations (Sadiqeen et al., 2023). Approval mechanisms typically involve multiple stakeholders, including procurement, compliance, and information security functions, to ensure comprehensive risk assessment (Lockamy & McCormack, 2011).

Digital transformation has significantly impacted purchasing processes. E-procurement platforms facilitate structured supplier evaluation, automated compliance checks, and documentation management (Fisher, 2023). However, digital maturity varies considerably across institutions, with many banks in developing markets still transitioning to fully digitalized purchasing systems (Zimmer et al., 2016).

2.2.3 Contract Management

Contract management encompasses the systematic administration and monitoring of supplier agreements throughout their lifecycle (Uher & Davenport, 2008). This practice involves structured approaches for contract implementation, performance monitoring, dispute resolution, and renewal decisions (Morris & Pinto, 2007). Effective contract management ensures organizations receive intended value from supplier relationships while minimizing third-party risks. In banking institutions, contract management serves as a critical control mechanism for supplier compliance risks. Regulatory frameworks often mandate specific contractual provisions related to data protection, service levels, audit rights, and compliance obligations (Choudhry, 2018). These requirements necessitate sophisticated contract management capabilities, including centralized document repositories, automated monitoring systems, and systematic review processes (Jajja et al., 2019).

Contract management has evolved from document-centric approaches to relationship-oriented practices that emphasize ongoing performance monitoring and supplier development (Jiang,

2009). Modern frameworks incorporate supplier performance scorecards, compliance monitoring systems, and structured renewal processes (Saralaya et al., 2019). These frameworks are particularly important in heavily regulated environments like banking, where supplier compliance failures can have significant consequences.

2.2.4 Supplier Compliance Risk

Supplier compliance risk represents the potential for financial losses, operational disruptions, regulatory penalties, or reputational damage arising from suppliers' failure to adhere to applicable laws, regulations, or contractual requirements (Can Saglam et al., 2020). This risk category has gained prominence as organizations expand their reliance on third-party providers, creating complex dependencies that require sophisticated management approaches (Ghadge et al., 2019).

In commercial banking, supplier compliance risk encompasses several dimensions. Regulatory compliance risk involves potential violations of banking regulations by third parties (Krepysheva et al., 2020). Data security risk concerns unauthorized access to sensitive information by suppliers (Monda et al., 2020). Operational compliance risk involves deviations from established procedures that could impact banking operations (Wiengarten et al., 2016). Ethical compliance risk relates to supplier conduct that could violate institutional values or harm reputational standing (Yusof et al., 2021). Organizations typically classify supplier compliance risks according to impact and likelihood, establishing tiered management approaches (Gurtu & Johny, 2021). Mission-critical suppliers with access to sensitive systems require rigorous oversight. Vital suppliers with moderate access present high risk, important suppliers with limited access create medium risk, and minor suppliers with minimal integration pose low risk (Gualandris et al., 2018).

2.3 Theoretical Review

This section examines established theoretical frameworks that inform understanding of procurement practices and supplier compliance risk management. Several complementary theories provide a foundation for understanding how procurement practices influence supplier compliance risk levels in commercial banks.

2.3.1 Principal-Agent Theory

Principal-agent theory, developed through works by Ross (1973), Jensen and Meckling (1976), and Holmström (1979), provides insights into procurement relationships by examining delegation challenges when one party (principal) engages another (agent) to perform services. In procurement

contexts, banks function as principals delegating activities to supplier agents, creating potential information asymmetries and goal conflicts (Baiman, 1990).

These delegation challenges are acute in banking procurement, where regulatory requirements add complexity. Banks must overcome information asymmetries regarding supplier compliance capabilities while implementing monitoring mechanisms that ensure adherence to both contractual and regulatory requirements (Arrow, 1985). Enforcement mechanisms, including performance incentives, penalties for non-compliance, and audit rights, help mitigate agency risks (Wiseman et al., 2012). Principal-agent theory explains why procurement practices must incorporate robust supplier selection, monitoring, and performance management. The theory suggests banks should implement structured due diligence to reduce pre-contractual information asymmetries, develop comprehensive contractual provisions to align supplier incentives, and establish ongoing monitoring systems to detect compliance deviations (Hart, 1995).

2.3.2 Transaction Cost Economics

Transaction cost economics, pioneered by Coase (1937) and developed by Williamson (1979, 1985), examines how organizations determine efficient governance structures for economic exchanges. This perspective focuses on minimizing transaction costs—expenses associated with search, negotiation, monitoring, and enforcement activities (Williamson, 1981). In banking procurement, transaction cost considerations influence governance decisions. Banks must weigh costs of developing internal capabilities against transaction costs of external procurement, including supplier search, contract negotiation, compliance monitoring, and enforcement (Fama & Jensen, 1983). These costs increase for specialized banking activities involving proprietary information or subject to specific regulatory requirements (Perrow, 1986). Transaction cost economics explains why banks implement structured procurement practices that standardize supplier management. These approaches reduce search and negotiation costs through preferred supplier programs, minimize monitoring costs via centralized compliance systems, and reduce enforcement costs by developing clear performance metrics and remediation protocols (Laffont & Martimort, 2002).

2.3.4 Risk Management Theory

Risk management theory provides a comprehensive framework for understanding how organizations identify, assess, mitigate, and monitor potential threats to their objectives. This theoretical domain has evolved through contributions from Knight (1921) on risk versus uncertainty, Kaplan and Garrick (1981) on quantitative risk assessment, and Power (2007) on the risk management of everything. Central to risk management theory is the systematic process of risk identification, assessment, response planning, and monitoring (ISO, 2018). This process begins with comprehensive risk identification

across strategic, operational, financial, and compliance categories (COSO, 2017). Risk assessment evaluates identified risks based on likelihood and potential impact, often using quantitative approaches to prioritize mitigation efforts (Aven, 2016).

Risk response planning establishes strategies for addressing priority risks, including avoidance (eliminating risk-creating activities), mitigation (reducing likelihood or impact), transfer (shifting risk to third parties), or acceptance (retaining risks within tolerance thresholds) (Hillson & Murray-Webster, 2017). Risk monitoring establishes ongoing mechanisms for tracking risk indicators, evaluating control effectiveness, and identifying emerging threats (IRM, 2002). In banking procurement, risk management theory emphasizes systematic approaches to supplier-related risks. Banks must implement structured frameworks for identifying compliance threats across their supplier ecosystem, assessing severity based on criticality and exposure levels, developing appropriate mitigation strategies, and implementing monitoring systems to detect emerging issues (Hopkin, 2018; Fraser & Simkins, 2016).

The theory highlights the interconnected nature of risks within organizational systems. Supplier compliance risks cannot be managed in isolation but must be considered within the broader enterprise risk management framework (Purdy, 2010). This interconnectedness is particularly evident in banking, where supplier-related risks can affect operational resilience, regulatory compliance, financial stability, and reputation (Merna & Al-Thani, 2008). Risk management theory's emphasis on risk appetite provides valuable perspectives on how organizations establish boundaries for acceptable risk exposure (Godfrey et al., 2020). Banks must determine risk appetite for supplier relationships, establishing clear thresholds based on strategic priorities, regulatory requirements, and operational constraints (Lavastre et al., 2014). While risk management theory provides valuable frameworks, it has limitations. The challenge of accurately identifying all potential risks becomes acute in dynamic environments where threats emerge rapidly (Aven & Renn, 2009). Additionally, the theory's emphasis on quantitative assessment may not fully capture qualitative aspects of supplier relationships that significantly impact risk profiles (Taleb, 2007).

2.3.5 Integration of Theoretical Perspectives with Conceptual Framework

The theoretical frameworks discussed above provide complementary perspectives that create a robust foundation for understanding the relationship between procurement practices and supplier compliance risk management. These theories directly inform the conceptual framework of this study and establish the theoretical basis for the hypothesized relationships between variables. Principal-agent theory and transaction cost economics explain why structured procurement practices are necessary to manage supplier relationships effectively. These theories support the inclusion of procurement planning, purchasing processes, and contract management as independent variables, as they represent

mechanisms for addressing information asymmetries and managing transaction costs in supplier relationships.

Risk management theory provides the foundation for understanding supplier compliance risk levels as the dependent variable. The theory's emphasis on systematic risk identification, assessment, and monitoring directly informs how this study conceptualizes and measures compliance risk levels across different supplier categories. Together, these theoretical perspectives provide a comprehensive foundation for the conceptual framework developed in this study. They explain why procurement practices are expected to influence supplier compliance risk levels, how these relationships may vary based on organizational characteristics, and what mechanisms drive these effects.

2.4 Empirical Review

This section presents a critical analysis of recent empirical studies examining the influence of procurement practices on supplier compliance risk management, with a specific focus on the banking sector. The review is structured thematically to address the four key independent variables: procurement planning, purchasing processes, contract management, and the collective effect of these practices on banking stability. Each subsection synthesizes relevant findings, identifies sector-specific implications, and highlights gaps in the existing literature, particularly within the context of Kenya's commercial banking industry.

2.4.1 Procurement Planning and Supplier Compliance Risk Levels

Akinradewo et al. (2022) conducted a comprehensive analysis of procurement planning practices across 45 African banks to examine the impact of mature planning processes on compliance violations. The study used a mixed-methods approach, combining survey data with in-depth interviews. The findings revealed that banks with mature planning processes experienced a 47% reduction in compliance violations and a 35% decrease in high-risk supplier engagements. The study concluded that integrating risk assessment into procurement planning is crucial for mitigating supplier compliance risks. However, the research focused primarily on West African banks, leaving a gap in understanding the East African context.

Maundu (2022) addressed this gap by examining procurement planning in Kenyan commercial banks using a mixed-methods approach involving surveys and case studies. The study found that banks with structured planning processes had 35% fewer supplier-related compliance breaches, and those integrating procurement planning with enterprise risk management achieved a 40% improvement in supplier performance monitoring. The research also identified significant disparities between large and small banks' planning capabilities. The study

concluded that effective procurement planning is essential for managing supplier compliance risks, but resource constraints and capability gaps pose challenges for smaller banks. However, the study did not fully explore the specific factors contributing to these disparities.

Matunga et al. (2021) investigated the relationship between procurement planning maturity and supplier compliance in Kenyan banks through a longitudinal analysis of procurement data from 15 major banks. The study found that institutions with advanced planning processes experienced 55% fewer regulatory violations and achieved 30% cost savings. The research concluded that mature procurement planning processes are critical for ensuring supplier compliance and driving operational efficiency. However, the study was limited to large banks, underscoring the need for research on planning practices in smaller institutions.

Nyangau and Thogori (2021) conducted a study on the effects of procurement practices on the performance of commercial banks in Nairobi County, Kenya. The study used a descriptive research design and collected primary data from supply chain managers using questionnaires. The findings showed that supplier relationship management, ICT integration, inventory management, and strategic outsourcing had positive and significant influences on the performance of commercial banks. The study concluded that effective procurement practices are crucial for enhancing the performance of commercial banks in Kenya. However, the study focused on performance measures rather than specifically examining the impact on banking sector stability through supplier compliance risk management.

While these studies provide valuable insights, they do not comprehensively address the unique challenges faced by Kenyan commercial banks in aligning procurement planning with the rapidly evolving regulatory landscape. A significant research gap exists regarding the role of technological adoption in procurement planning within Kenya's banking sector. Although Monda (2020) documented the technological risks facing mobile banking in Kenya, and Muriuki (2018) noted the growing importance of digital transformation in banking operations, neither study specifically examined how technology adoption in procurement planning affects supplier compliance risk management. Recent industry reports by the Kenya Bankers Association (2023) indicate varying levels of digital maturity in procurement functions across the sector, but empirical research on this topic remains limited. This presents a clear research gap that requires investigation, particularly given Kenya's reputation as a financial technology hub in East Africa. This study aims to address these gaps by examining the effect of procurement planning on supplier compliance risk levels in Kenyan commercial banks, with

specific attention to how technological adoption influences planning effectiveness within the country's unique regulatory context.

2.4.2 Purchasing Process and Supplier Compliance Risk Levels

Wawire (2022) examined purchasing practices in Kenyan financial institutions to assess the impact of standardized processes on supplier-related incidents. The study employed a survey methodology targeting procurement professionals in Kenyan banks. The findings showed that banks with standardized purchasing processes experienced a 40% reduction in supplier-related incidents and a 55% improvement in risk detection through real-time supplier performance monitoring. The study concluded that systematic supplier evaluation and real-time monitoring are critical for managing supplier compliance risks. However, the research also revealed significant gaps in the adoption of digital purchasing systems, particularly among smaller banks.

Zimmer et al. (2016) investigated the impact of digital transformation on purchasing processes in emerging market banks through a comparative analysis of 200 institutions. The study found that digitalized purchasing improved supplier compliance monitoring by 60% and enhanced transparency through blockchain-based audit trails. The research concluded that digital purchasing systems are crucial for effective supplier compliance risk management. Despite being conducted in 2016, these findings maintain relevance in today's banking environment for several reasons. First, the fundamental principles of digital purchasing identified by Zimmer—process standardization, automation of compliance checks, and centralized documentation—remain core components of effective purchasing systems regardless of specific technological implementations. Second, the implementation challenges identified (resource constraints, data integrity issues, and cross-functional integration barriers) continue to affect digital transformation initiatives in banking procurement, as confirmed by more recent studies (Fisher, 2023; Hooks et al., 2022). Third, while newer technologies have emerged, many Kenyan banks are still working to implement the baseline digitalization that Zimmer's study identified as beneficial, making the findings particularly relevant for institutions at earlier stages of digital maturity.

Sadiqeen et al. (2023) investigated the role of strategic procurement practices on procurement performance in commercial banks in Quetta, Pakistan. The study employed a quantitative approach and used a convenience sampling technique to collect data through questionnaires. The results demonstrated a significant positive relationship between strategic procurement

practices and procurement performance. Furthermore, the study found that challenges related to procurement mediated the relationship between the two constructs. The study highlighted the importance of procurement practices in enhancing the performance of various banking functions. While Sadiqeen's research focused primarily on operational performance rather than compliance, the connection between performance and compliance risk is substantial. Enhanced procurement performance typically results in more accurate supplier information, better contract management, and more systematic monitoring—all of which directly contribute to improved compliance management. As noted by Norrman and Jansson (2004), procurement performance improvements in documentation accuracy, process consistency, and information availability create the foundation for effective compliance monitoring. Thus, the performance benefits documented by Sadiqeen likely translate to compliance advantages, though this relationship requires further empirical investigation in the Kenyan context.

Kusrini and Hanim (2021) provided further insights into the role of international standards in shaping purchasing processes through a comparative analysis of banks in Southeast Asia. The study found that banks adhering to ISO 28001 standards achieved 43% better supplier compliance outcomes and improved risk assessment accuracy. The research concluded that adopting international standards in purchasing processes is essential for managing supplier compliance risks. However, the study focused primarily on banks in Southeast Asia, leaving a gap in understanding how these standards apply in the African context.

African banks face several unique challenges in adopting international standards like ISO 28001 that were not addressed in Kusrini and Hanim's research. First, the resource intensity of standards implementation presents a significant barrier in the African context, where many banks operate with more constrained technology budgets compared to their Asian counterparts (Changalima & Mdee, 2023). The certification process requires substantial documentation, staff training, system upgrades, and often external consultation, creating financial hurdles particularly for smaller institutions. Second, the predominantly Western orientation of many international standards may not fully address unique African operational realities, including infrastructure limitations such as power reliability issues and connectivity challenges that affect digital procurement systems (Intelligence, 2018). Third, regulatory frameworks in many African countries, including Kenya, have evolved along different trajectories than those in Southeast Asia, creating potential misalignment between local compliance requirements and international standards developed primarily for Western and Asian markets (Cooper et al.,

2019). These contextual differences help explain why, despite demonstrated benefits, the adoption of international standards in African banking procurement remains limited.

2.4.3 Contract management and Supplier Compliance Risk Levels

Jajja et al. (2019) conducted a comprehensive analysis of contract management practices in 85 emerging market banks to examine the impact of robust frameworks on compliance violations and regulatory reporting quality. The study employed structural equation modeling to analyze survey data. The findings demonstrated that banks with robust contract management frameworks experienced a 55% reduction in compliance violations and a 40% improvement in regulatory reporting quality. The study concluded that integrated contract management systems are crucial for monitoring supplier performance and ensuring compliance. However, the research did not specifically address the Kenyan banking context.

Saralaya et al. (2019) filled this gap by examining digital contract management systems in Kenyan commercial banks through a survey of 25 institutions. The study found that banks with automated contract monitoring systems experienced a 30% reduction in compliance breaches and a 45% improvement in supplier performance tracking. The research also highlighted the potential of advanced analytics for predicting compliance issues, with banks using these technologies achieving a 70% accuracy rate. The study concluded that digital contract management systems are essential for effective supplier compliance risk management in Kenyan banks. However, the study also noted that implementation costs remained a significant barrier for smaller banks.

Leppänen (2024) provided further insights through a longitudinal analysis of contract management practices in 40 European banks. The study found that institutions with dynamic contract management systems adapted 75% faster to regulatory changes and achieved 50% improvements in compliance monitoring efficiency. The research concluded that flexible and integrated contract management systems are critical for managing supplier compliance risks in a rapidly changing regulatory environment. However, the study focused primarily on European banks, leaving a gap in understanding how these findings apply to the Kenyan context.

Rono (2017) examined the effects of procurement practices on organizational performance within the public sector, using a case study of East African Portland Cement Company Limited. The study employed a descriptive design and collected primary data through questionnaires administered to finance and procurement employees. The findings suggested that building robust relationships with key suppliers, making significant investments in inventories, and

adopting efficient production practices can lead to cost savings and improved organizational performance. However, the study focused on a manufacturing company in the public sector and did not specifically address the banking industry or the impact of procurement practices on sector-wide stability.

Anane et al. (2019) investigated the effect of procurement practices on service delivery in the Volta River Authority (VRA) in Ghana. The study used a quantitative research approach and an explanatory design, collecting primary data through structured questionnaires. The results showed that procurement policy, procurement planning, and sustainable procurement were significant determinants of service delivery, with procurement policy being the strongest predictor. The study concluded that investing in sustainable procurement, procurement planning, and procurement policy can enhance service delivery to the public. However, the research focused on a public utility company and did not specifically examine the banking sector or the impact of procurement practices on sector-wide stability through supplier compliance risk management.

2.5 Research Gaps

The literature review has identified several gaps in the existing research on the effect of procurement practices on supplier compliance risk levels, especially within Commercial Banks in Kenya. Although previous studies have examined various aspects of supplier risk management and procurement practices, there is a notable lack of comprehensive research specifically investigating how procurement planning, the purchasing process, and contract management influence supplier compliance risk levels in the banking sector.

Several studies have investigated supplier management processes and their impact on supply chain performance and risk mitigation (Kusrini & Hanim, 2021; Zimmer et al., 2016; Caro et al., 2018). However, these studies have not specifically focused on the banking industry or the Kenyan context. Moreover, they have not comprehensively examined the relationship between Purchasing process and supplier compliance risk levels.

Studies have focused on the definition of contracts as legal agreements that all the parties fully understand their respective obligations managing their relationship and risks. Contracts define the purchaser and supplier duties, responsibilities, obligations, payment terms, cost implication and legal implications, (Morris and Pinto, 2007). However, these studies have not comprehensively examined the impact contract management has on supplier compliance risk levels in the specific context of Commercial Banks in Kenya.

Table 2.1: Summary of Literature and Research Gap

Author	Topic of Study	Key Findings	Research Gap
Kusrini & Hanim (2021)	Analysis of compliance and supply chain security risks based on ISO 28001 in a logistic service provider in Indonesia	The company implemented ISO 28001 to manage supply chain security risks and ensure compliance. Regular audits and monitoring were essential for maintaining compliance and mitigating risks.	The study focused on a single logistic service provider in Indonesia and did not specifically examine Commercial Banks in Kenya.
Zimmer et al. (2016)	Models supporting sustainable supplier selection, monitoring, and development	Sustainable supplier management requires a holistic approach considering economic, environmental, and social factors. Integrating sustainability criteria into supplier selection and monitoring is crucial for achieving sustainable supply chain management.	The study did not specifically focus on the banking industry or the Kenyan context and did not examine the relationship between supplier management processes and compliance risk levels.
Caro et al. (2018)	Improving supplier compliance through joint and shared audits with collective penalties	Joint and shared audits with collective penalties can effectively improve supplier compliance and reduce audit costs, leading to a win-win situation for both buyers and suppliers.	The study did not specifically focus on the banking industry or the Kenyan context and did not comprehensively examine the effect of supplier management processes on compliance risk levels.
Nyasulu (2018)	Alignment of strategic procurement function in city councils and its impact on compliance levels with public procurement procedures in Malawi	Aligning the strategic procurement function with organizational goals positively influences compliance with public procurement procedures. Top management support, employee training, and technology contribute to better alignment and compliance.	The study focused on city councils in Malawi and did not specifically examine Commercial Banks in Kenya or the relationship between strategic procurement planning and compliance risk levels.
Jama et al 2024	The impact of Procurement Practices on organizational performance: A Literature review.	Effective procurement practices are essential for successful organizations, as they help secure high-quality goods, services, foster partnerships, deliver cost savings and provide competitive advantage. Poor procurement practices such as corruption and mismanagement have a negative impact on the overall organization performance.	The study is generally based in Somalia and has not focused on the Procurement Practices in Commercial Banks in Kenya.

Seipp et al. (2020)	Review of international supply chain risk within banking regulations in Asia, US, and EU	Banking regulations across different regions share similar objectives in managing supply chain risks but vary in specific requirements. Standardizing processes and leveraging technology can improve cost efficiency while ensuring compliance.	Contextual Gap: The study examined banking regulations in Asia, US, and EU but did not include the African context, particularly Kenya's unique regulatory environment for commercial banks and their procurement practices.
Jajja et al. (2019)	Buyer-supplier relationships and organizational values in supplier social compliance	Buyer-supplier relationships characterized by trust, commitment, and cooperation positively influence supplier social compliance. Organizational values play a significant role in promoting supplier social compliance.	Conceptual Gap: While examining buyer-supplier relationships, the study did not investigate how specific procurement practices (planning, purchasing processes, contract management) affect compliance risk levels in regulated financial institutions.
Wawire (2022)	Risk management practices and supply chain performance in county governments of Western Kenya	Risk identification, assessment, and mitigation practices positively affect supply chain performance. Top management support and employee training are essential for effective risk management.	Contextual Gap: Though conducted in Kenya, the study focused on county governments rather than commercial banks, leaving a gap in understanding how risk management practices function within Kenya's banking sector.
Matunga et al. (2021)	Relationship between supplier relationship management and implementation of public procurement regulations in devolved governments in Kenya	Supplier relationship management practices positively influence the implementation of public procurement regulations. Capacity building and stakeholder involvement are crucial for successful supplier relationship management.	Contextual Gap: The study examined procurement in Kenyan public sector but did not address the unique compliance requirements and risk management needs of commercial banks operating under CBK regulations.
Jama et al. (2024)	The impact of Procurement Practices on organizational performance: A Literature review	Effective procurement practices are essential for successful organizations, as they help secure high-quality goods, services, foster partnerships, deliver cost savings and provide competitive	Conceptual Gap: While establishing the importance of procurement practices for organizational performance, the study did not examine their specific effect on

		advantage. Poor procurement practices have a negative impact on organizational performance.	compliance risk levels, particularly in the banking sector.
Mwanzia (2021)	The effect of risk management on financial performance of commercial banks in Kenya	Effective risk management frameworks positively impact the financial performance of commercial banks in Kenya.	Conceptual Gap: While examining risk management in Kenyan banks, the study focused on financial performance outcomes rather than investigating how procurement practices specifically influence supplier compliance risk levels.

2.6 Conceptual Framework

The conceptual framework provides the interrelationship between the study variables. It illustrates the directional relationship of the independent variables of Procurement planning, Purchasing process, and contract management on the dependent variable of supplier compliance risk levels. Figure 2.5 below shows the study variables with their measurable indicators.

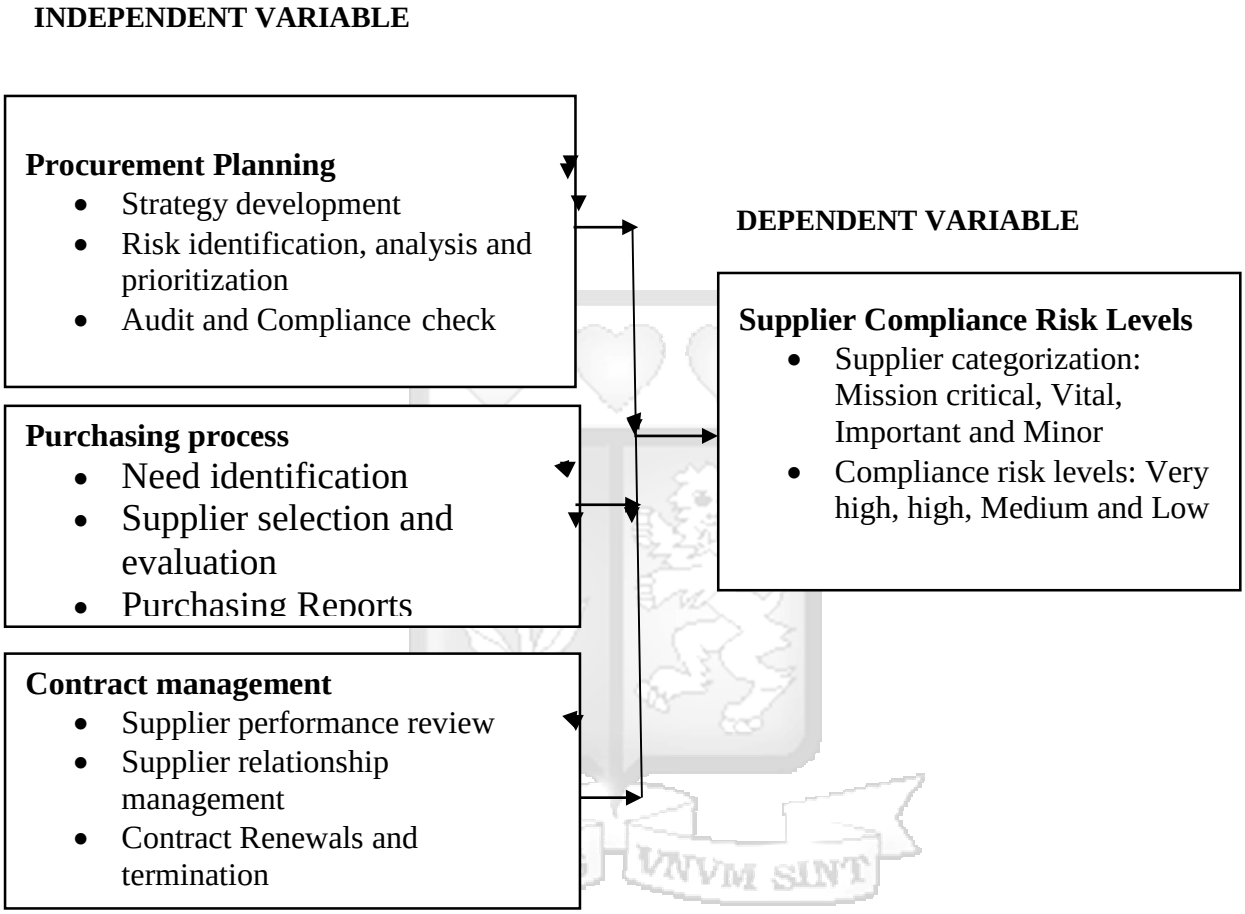

Figure 2.1: Conceptual Framework

Source: (Researcher 2024)

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Table 2.2 Operationalization of the Study Variables

Variable	Type of Variable	Indicator
Procurement Planning	Independent	● Strategy Development ● Risk identification, analysis and prioritization ● Audit and Compliance checks
Purchase Process	Independent	● Need Identification ● Supplier selection and evaluation ● Purchase reports
Contract Management	Independent	● Supplier performance review ● Supplier relationship management ● Contract renewal and termination
Supplier compliance risk levels	Dependent	● Supplier categorization: Mission critical, Vital, Important, Minor ● Compliance risk levels: Very high, high, medium, low

(Source: Researcher 2024)

2.7 Chapter Summary

This chapter reviews relevant studies on the effect of procurement practices on supplier compliance risk levels. The literature examined and presented empirical findings on how procurement practices, such as procurement planning, the purchasing process, and contract management, affect supplier compliance risk levels. The theoretical review explored the Risk Management Theory, Principal-Agent Theory and Transaction Cost Economics theory to understand the relationships between variables and identify research gaps to guide the study. The conceptual framework illustrates the interrelationships between the study variables and their measurable indicators. The next chapter outlines the research methodology employed for the study, including the research design, population and sampling, data collection methods, and data analysis techniques.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter details the comprehensive research methodology used to investigate the effect of procurement practices on supplier compliance risk levels in Commercial Banks in Kenya. The chapter begins by explaining the research philosophy that guided the study, followed by a description of the research design. The chapter then outlines the target population and sampling approach, data collection methods, and research quality measures including validity and reliability testing. The analytical techniques employed for data analysis are discussed, with specific attention to diagnostic tests and regression analysis. Lastly, the chapter addresses ethical considerations that guided this research. This systematic approach ensured that the study was conducted with methodological rigor while addressing the research objectives effectively.

3.2 Research Philosophy

Research philosophy forms the foundation of a study by directing the researcher's approach to understanding and interpreting the phenomena being examined. This study adopted a positivist research philosophy, which emphasizes objectivity and the use of scientific methods to understand social realities (Park et al., 2020). The positivist approach enabled the researcher to maintain an objective stance, avoiding personal biases that could undermine the study's integrity. This philosophy was well-suited for investigating the causal relationship between procurement processes and supplier compliance risk levels for Commercial Banks in Kenya.

By adopting a positivist approach, the researcher conducted a structured, deductive, and quantitative study (Park et al., 2020). This deductive approach involved testing theoretical propositions through empirical observation, aligning with the study's objective of examining how established procurement theories manifest in Kenya's banking sector. The positivist philosophy enabled the collection and analysis of data objectively, drawing causal explanations based on observable and measurable facts rather than subjective interpretations. Unlike interpretivism, which relies on subjective interpretations and qualitative methods (Alharahsheh & Pius, 2020), or critical realism, which emphasizes underlying structures that influence observable events (Ryba et al., 2022), positivism provided a rigorous and systematic approach to understanding the relationships between variables. This approach facilitated the development of generalizable findings that contribute to the existing body of knowledge in supplier compliance risk management.

3.3 Research Design

This study utilized an explanatory research design to examine the effect of procurement practices on supplier compliance risk levels in Commercial Banks in Kenya. Explanatory research is appropriate when the goal is to gain a deeper understanding of an issue by examining causal relationships between variables (Rahi, 2017). This design facilitated the investigation of how the independent variables (procurement planning, purchasing process, and contract management) affect the dependent variable (supplier compliance risk levels). The explanatory design was particularly appropriate for this study because it enabled the researcher to move beyond descriptive analysis to examine causal relationships. This approach aligned with the deductive nature of the research, which sought to test hypothesized relationships derived from theoretical foundations including principal-agent theory, transaction cost economics, and risk management theory. The design facilitated systematic examination of how procurement practices influence compliance risk outcomes in the specific context of Kenya's commercial banking sector.

The study employed a quantitative approach, collecting numerical data through structured questionnaires administered to procurement professionals in commercial banks. This approach enabled the statistical examination of relationships between variables, providing objective measures of the strength and direction of these relationships. The quantitative methodology aligned with the positivist philosophy and explanatory design by facilitating the testing of hypothesized relationships through statistical analysis. The explanatory research design, coupled with a quantitative approach, enabled the production of findings that are statistically representative of the target population. This approach provided reliable and valid results that enhance understanding of supplier compliance risk management in the banking sector, offering both theoretical insights and practical guidance for procurement professionals and banking regulators.

3.4 Population and Sampling

3.4.1 Target Population

A target population refers to the entire group of elements that possess common characteristics and are of interest to the researcher (Thompson, 2013). The target population for this study consisted of the 38 commercial banks licensed and regulated by the Central Bank of Kenya as of December 2023. These banks represented a diverse spectrum of the Kenyan banking sector, including 11 large banks that controlled approximately 75% of the market share, 17 medium-

sized banks, and 10 small banks. Among these institutions, 12 banks were listed on the Nairobi Securities Exchange, 15 were foreign-owned, and 23 were domestically owned.

This population composition provided a comprehensive representation of Kenya's banking sector, encompassing institutions of different sizes, ownership structures, and operational scales. The diversity within the population enabled the study to examine how procurement practices and their effects on supplier compliance risk levels might vary across different organizational contexts, providing richer insights into the research questions.

3.4.2 Sampling Technique and Sample Size

Sampling involves selecting a subset of individuals from a larger population to represent the entire group in a study (Saunders et al., 2016). This study employed a census approach rather than selecting a sample, as the target population of 38 commercial banks was manageable and sufficiently small to include all elements. A census approach is appropriate when the population size is relatively small and accessible, as it eliminates sampling error and provides comprehensive data about the entire population (Taherdoost, 2016).

The decision to conduct a census rather than select a sample was based on several methodological considerations. First, the relatively small population size (N=38) made it feasible to include all elements, eliminating concerns about sample representativeness. Second, a census approach enhanced the validity of findings by eliminating sampling error that might occur with probability or non-probability sampling techniques. Third, including all commercial banks provided a comprehensive understanding of procurement practices across the entire Kenyan banking sector rather than a subset. The unit of analysis for this study was one procurement manager from each bank, giving a total of 38 respondents who were directly involved in supplier risk management, procurement practices, and compliance-related activities. This approach ensured that perspectives from procurement leadership across all commercial banks were captured, providing insights into strategic decision-making processes related to supplier compliance risk management throughout the Kenyan banking sector.

3.5 Data Collection Methods

This study employed structured questionnaires as the primary data collection instrument to gather information from procurement leaders in commercial banks. The questionnaires combined closed-ended questions using Likert scales with select open-ended questions to capture both quantitative measurements and qualitative insights. This mixed approach provided

standardized data for statistical analysis while allowing respondents to offer additional context or explanations where appropriate.

To maximize response rates and accommodate different work arrangements, the questionnaires were administered through both digital and physical distribution channels. Digital questionnaires were created using Google Forms and distributed via official email addresses, while physical questionnaires were distributed using a drop-and-pick method for respondents who preferred hardcopies or where bank policies restricted online survey access. This dual-channel approach enhanced accessibility and convenience for respondents, contributing to a higher response rate. The questionnaire was designed to gather comprehensive information aligned with the research objectives, featuring sections on demographic information, procurement planning practices, purchasing process implementation, contract management practices, and supplier compliance risk assessment. The questions utilized a 5-point Likert scale for quantitative measurements, with responses ranging from "Strongly Disagree" (1) to "Strongly Agree" (5).

The 5-point Likert scale was selected based on several methodological considerations. First, it provided sufficient discrimination for measuring attitudes and perceptions about procurement practices without overwhelming respondents with excessive options (Joshi et al., 2015). Second, the 5-point scale has demonstrated superior reliability and validity in organizational research compared to scales with fewer points (Krosnick & Presser, 2010). Third, it facilitated more sophisticated statistical analyses including correlation and regression, which were central to this study's analytical approach (Brown, 2011). Additionally, the scale allowed for a neutral midpoint, which was important when measuring complex organizational practices where respondents might have genuinely neutral positions on certain aspects (Garland, 1991).

Each questionnaire was accompanied by an introduction letter explaining the study's purpose, a consent form ensuring voluntary participation, clear completion instructions, and the researcher's contact information for any needed clarifications. A two-week response window was allocated, with follow-up communications conducted through phone calls and emails to ensure optimal participation. The researcher maintained detailed records of questionnaire distribution and collection to ensure comprehensive data gathering from all target respondents.

3.6 Research Quality

The quality of research depends significantly on the data collected and its subsequent analysis. This study employed three key tests - validity, pilot, and reliability - to ensure research quality and credibility of findings.

3.6.1 Validity Test

Validity testing determines the extent to which a research instrument accurately measures what it intends to measure (Heale & Twycross, 2015). This study focused on both content and construct validity to ensure the research instrument effectively captured the intended variables and concepts. Content validity was assessed by evaluating how comprehensively the questionnaire covered the study variables and their dimensions. The questionnaire items were developed based on the conceptual framework and operationalization of variables presented in Chapter Two, ensuring alignment with the theoretical foundations of the study. The research supervisor reviewed the questionnaire to verify that it adequately covered all aspects of procurement planning, purchasing processes, contract management, and supplier compliance risk levels. Construct validity was evaluated by assessing how well the questionnaire measured the theoretical constructs it was designed to capture. This involved selecting indicators that related specifically to each study variable while remaining discriminant from other variables (Agarwal, 2011). Factor analysis was conducted to confirm that questionnaire items loaded appropriately on their intended constructs, providing statistical confirmation of construct validity.

3.6.2 Pilot Test

A pilot test was conducted to assess the validity and reliability of the questionnaire before full-scale distribution. As suggested by Robson and McCartan (2016), research tools should be tested on a small proportion of the sample to assess their effectiveness and efficiency. Following Connelly's (2008) recommendation that pilot study samples should consist of at least 10% of the sample size, four procurement managers from commercial banks not included in the main study population participated in the pilot test. The pilot test revealed several important insights that led to questionnaire refinements. Two questions in the procurement planning section were identified as potentially ambiguous and were reworded for clarity. In the purchasing process section, one question was split into two separate items to avoid double-barreled questioning. The pilot respondents also suggested including additional response options for the demographic questions about experience and educational background to better

capture the diversity of procurement professionals. The average completion time was 18 minutes, which was deemed reasonable by the participants.

3.6.3 Reliability Test

Reliability testing assessed the consistency and stability of the research instrument, ensuring that it would produce similar results under consistent conditions. The Cronbach's alpha formula was used to verify the internal reliability of the questionnaire (Bonett & Wright, 2015). Each section of the questionnaire corresponding to study variables underwent separate reliability testing, with an alpha coefficient of 0.7 or higher considered acceptable for research purposes. The reliability coefficients obtained were: procurement planning ($\alpha = 0.82$), purchasing process ($\alpha = 0.78$), contract management ($\alpha = 0.81$), and supplier compliance risk levels ($\alpha = 0.79$). These values all exceeded the 0.7 threshold, indicating good internal consistency across all measured variables. The strong reliability coefficients enhanced confidence in the research instrument's ability to produce consistent results.

Several additional measures were implemented to ensure data reliability beyond internal consistency. First, potential response biases were addressed by including reverse-coded items in each section of the questionnaire, allowing for the identification of acquiescence bias (the tendency to agree regardless of content). Second, common method bias was mitigated through procedural remedies including assurance of anonymity to reduce social desirability bias, counterbalancing the order of questions, and using different scale endpoints for predictor and criterion variables (Podsakoff et al., 2012). Data reliability was further enhanced through systematic data screening procedures, including checking for missing values, outliers, and response patterns. Where missing data was identified (less than 5% of responses), pairwise deletion was employed during analysis. Additionally, follow-up verification was conducted with a random selection of five respondents to confirm the accuracy of their responses, finding 100% consistency with their original submissions.

3.7 Diagnostic Tests

Before conducting regression analysis, several diagnostic tests were performed to ensure the data met the required assumptions for valid statistical inference. These tests were crucial for establishing the reliability of regression findings and determining appropriate analytical approaches.

3.7.1 Normality Test

The normality test assessed whether the residuals from the regression model followed a normal distribution, which is a key assumption for parametric statistical analysis. The Shapiro-Wilk test was employed for this purpose due to its superior power compared to other normality tests, particularly for smaller sample sizes (Nthambi, 2014). This test evaluated the null hypothesis that the data came from a normally distributed population. If significant deviations from normality were detected ($p < 0.05$), appropriate transformations of variables (such as logarithmic, square root, or Box-Cox transformations) would be applied to address this violation. However, regression analysis is generally robust to minor violations of normality with sample sizes of 30 or more, as supported by the central limit theorem (Schmidt & Finan, 2018).

3.7.2 Multicollinearity Test

Multicollinearity occurs when independent variables in a regression model are highly correlated with each other, potentially leading to unstable and unreliable coefficient estimates. Variance Inflation Factors (VIF) were calculated to detect the presence of multicollinearity among independent variables. VIF values exceeding 5 would indicate problematic multicollinearity that could inflate standard errors and make regression coefficients unstable and difficult to interpret. If high multicollinearity were detected, remedial measures would include: (1) centering the variables, (2) creating composite variables from highly correlated predictors, or (3) removing one of the highly correlated predictors from the analysis. These approaches would help maintain the integrity of the regression model while addressing potential estimation problems caused by multicollinearity.

3.7.3 Heteroscedasticity Test

The Breusch-Pagan test was used to check for heteroscedasticity, which occurs when the variance of residuals is not constant across levels of the independent variables. Heteroscedasticity can lead to inefficient estimates and invalid standard errors, potentially affecting the reliability of hypothesis tests. If heteroscedasticity was detected, robust standard errors would be employed in the regression analysis to produce valid inference despite this violation. This approach would ensure that statistical significance tests remained reliable even when the constant variance assumption was not met, providing greater confidence in the study's findings.

3.8 Data Analysis

The study employed both descriptive and inferential statistics to analyze the collected data using SPSS version 26. Descriptive statistics, including means, standard deviations, and frequencies, provided an initial understanding of procurement practices and supplier compliance risk levels across commercial banks. These measures helped identify patterns and trends in how banks implement procurement practices and manage supplier risks. Multiple regression analysis has been selected as the primary inferential technique due to its ability to examine the simultaneous effects of multiple independent variables (procurement practices) on a dependent variable (supplier compliance risk levels). This technique is particularly suitable for this study as it allows for quantification of the individual and combined effects of procurement planning, purchasing process, and contract management on supplier compliance risk levels.

The regression equation was:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$……………………………………………………………………………(i)

Where:

Y is the dependent variable = Supplier compliance risk levels

X1 is the independent variable = Procurement Planning

X2 is the independent variable = Purchasing Process

X3 is the independent variable = Contract Management

α and β are the regression coefficients

ε is the estimate margin of error

Before conducting the regression analysis, several diagnostic tests were performed to ensure the data meets the required assumptions. These include tests for normality using the Shapiro-Wilk test, multicollinearity through Variance Inflation Factors (VIF), heteroscedasticity using the Breusch-Pagan test, and linearity through scatter plots. Any violations of these assumptions were addressed through appropriate data transformations or alternative statistical techniques. The model's overall fit was assessed using R-squared values, F-statistics, and residual analysis. Additional statistical tests included correlation analysis to examine the strength and direction

of relationships between variables, and ANOVA to assess significant differences in procurement practices across different bank categories.

3.9 Ethical Considerations

This research adhered to established ethical standards and guidelines throughout its execution. Prior to data collection, the researcher obtained necessary approvals from Strathmore University Ethics Review Board and the National Commission for Science, Technology and Innovation (NACOSTI). Additionally, written consent was obtained from each participating bank's procurement leader, clearly explaining the study's purpose and ensuring voluntary participation. All collected data was treated with confidentiality, used solely for academic purposes, and stored securely to protect participants' privacy. The research findings were reported honestly and transparently, with proper acknowledgment of all referenced sources.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter presents the analysis and findings of the research study examining the effect of procurement practices on supplier compliance risk levels in Commercial Banks in Kenya. The analysis is structured according to the research objectives, beginning with response rate and demographic information, followed by detailed analysis of how procurement planning, purchasing processes, and contract management influence supplier compliance risk levels. The chapter incorporates both descriptive and inferential statistical analyses to provide comprehensive insights into the relationships between the study variables.

4.2 Background Information

The section highlights the response rate and the demographic information of the Commercial Banks that participated in the research. The study targeted procurement professionals from 38 Commercial Banks licensed by the Central Bank of Kenya, collecting data through questionnaires to examine how procurement practices influence supplier compliance risk levels.

4.2.1 Response Rate

The study targeted 38 respondents from Commercial Banks in Kenya, specifically targeting procurement managers or their equivalents. Figure 4.1 shows the response rate distribution.

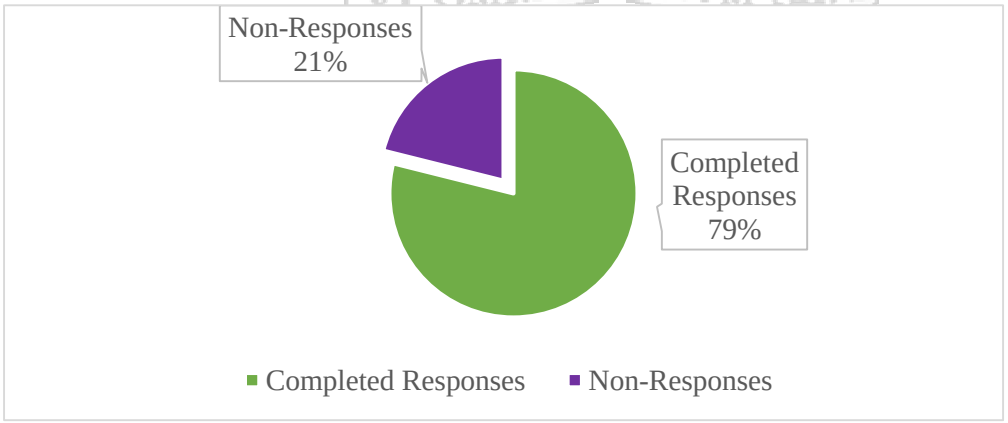

Figure 4.1: Response Rate

The achieved response rate of 79% is considered good for survey research and provides a sufficient foundation for statistical analysis and generalization of findings. This satisfactory

response rate can be attributed to the multi-modal data collection approach utilizing both online and physical questionnaires, coupled with effective follow-up strategies. According to Mugenda and Mugenda (2003), a response rate of 50% is adequate for analysis and reporting, 60% is good, and 70% and above is excellent. Therefore, the response rate of 79% was excellent for this study.

4.2.2 Gender of Respondents

The study sought to establish the gender distribution of procurement professionals in Commercial Banks in Kenya. The results are presented in Figure 4.2.

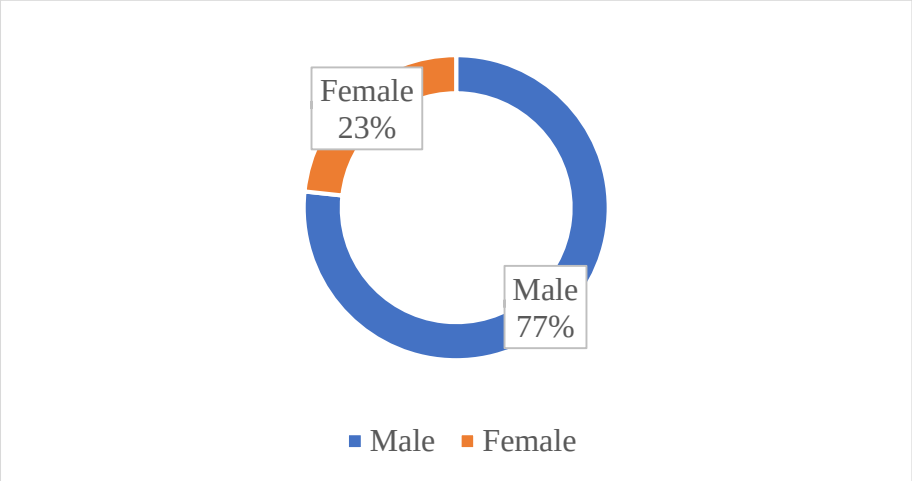

Figure 4.2: Gender of Respondents

Figure 4.2 shows that among the respondents in this study, 77% were male while female respondents constituted 23% of the total participants. This represents the gender composition of the procurement professionals who responded to the survey from the participating commercial banks.

4.2.3 Age of the Respondents

The study examined the age distribution of procurement professionals in the banking sector. The findings are presented in Figure 4.3.

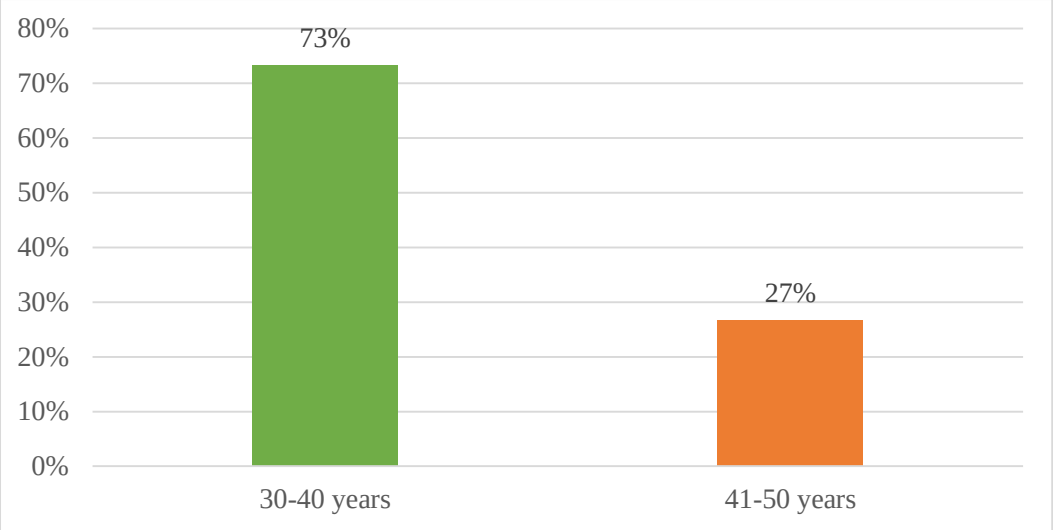

Figure 4.3: Age of the Respondents

Figure 4.3 reveals that most of the respondents 73% were aged between 30-40 years, while 27% were aged between 41-50 years. This indicates that procurement management positions in Commercial Banks are predominantly held by professionals in their middle career stages.

4.2.4 Level of Education for the Respondents

The study investigated the educational qualifications of procurement professionals in Commercial Banks. The results are presented in Table 4.1.

Table 4.1: Level of Education for the Respondents

Level of Education	Frequency	Percent
Master's Degree	17	57%
Bachelor's Degree	13	43%
Total	**30**	**100%**

Table 4.1 indicates that majority of the respondents 57% held Master's degrees while 43% had Bachelor's degrees. This high level of educational qualification suggests that Commercial Banks in Kenya prioritize advanced academic credentials for procurement management positions, ensuring a well-educated workforce in their procurement departments.

4.2.5 Designation within the Bank

The analysis of respondents' positions within their organizations revealed a clear hierarchical distribution across management levels in the banks' procurement departments. Middle management emerged as the dominant category, representing 60% of respondents, highlighting the operational focus of procurement roles. Junior management positions accounted for 23% of respondents, while senior management comprised 17% of the sample. This distribution pattern suggests that procurement functions in Kenyan commercial banks maintain a traditional pyramidal structure, with broader representation at middle management levels where day-to-day procurement operations and tactical decisions are managed.

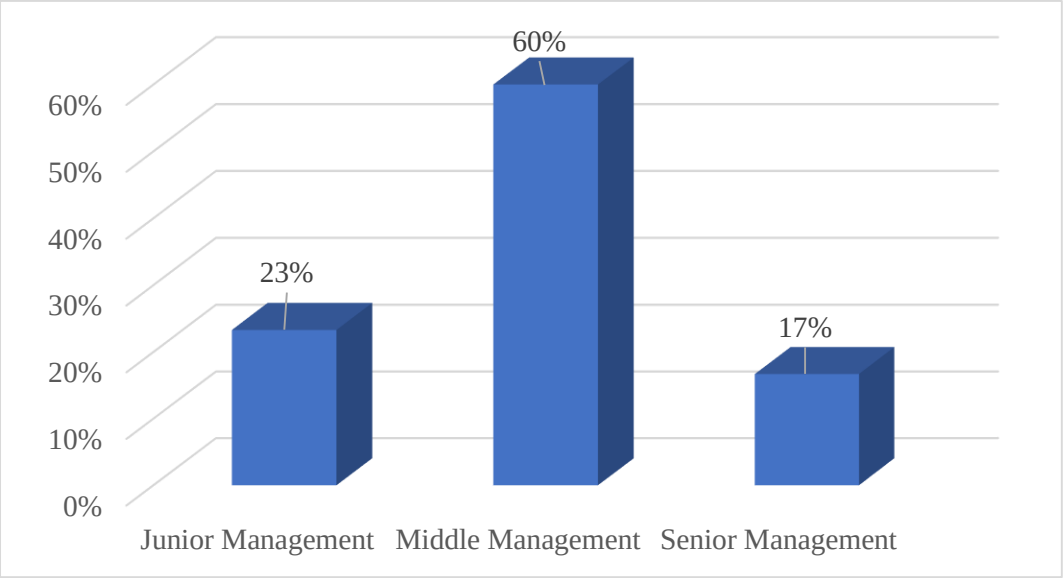

Figure 4.4: Designation within the Bank

4.2.6 Years of Experience in Procurement Management

The examination of professional experience among procurement managers revealed a workforce with substantial expertise in the field. The largest segment, comprising 53% of respondents, possessed between 11-20 years of experience, indicating a mature professional cohort. Those with extensive experience of 21-30 years represented 13% of respondents, while professionals with 5-10 years and those with less than 5 years each constituted 17% of the sample. This distribution demonstrates that the majority of procurement professionals in Kenyan commercial banks have accumulated significant experience, with 66% having over 11 years in the field, suggesting a well-seasoned workforce capable of handling complex procurement challenges and risk management responsibilities.

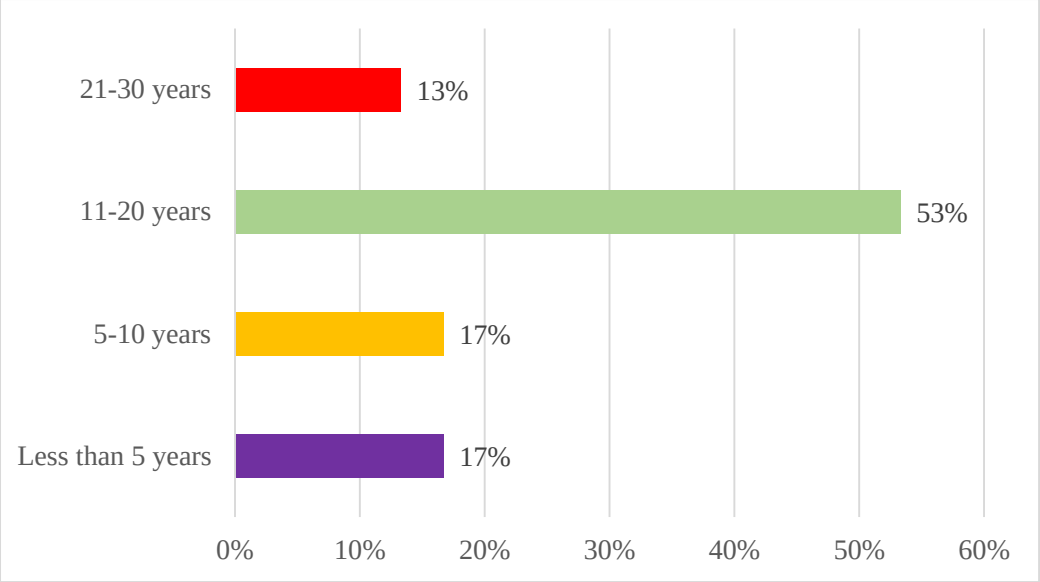

Figure 4.5: Years of Experience in Procurement Management

4.3 Descriptive Analysis

The descriptive analysis section examines the central tendencies and variability of responses across the four key areas of study: procurement planning, purchasing processes, contract management, and supplier compliance risk levels. Using a 5-point Likert scale where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree," the analysis provides insights into how commercial banks in Kenya implement and perceive these various aspects of procurement practices in relation to supplier compliance risk management.

4.3.1 Procurement Planning and Supplier Compliance Risk Levels

The study examined how procurement planning practices influence supplier compliance risk levels in commercial banks. This analysis focused on key aspects including procurement strategy development, risk classification systems, policy frameworks, and collaborative supplier development initiatives. Table 4.2 shows the results of descriptive statistics for procurement planning.

Table 4.2: Procurement Planning and Supplier Compliance Risk Levels

Statements	N	Mean	Std. Deviation
The Procurement department has procurement strategy for purchase process and contract management to ensure compliance with regulations and standards.	30	4.3	0.702
We regularly review and update our procurement strategy to meet current compliance requirements.	30	3.93	0.785

The Bank's suppliers are classified as Mission Critical, Vital, Important and Minor based on the level of risk: Very high, High, Medium and low that they pose.	30	4.23	0.728
The bank has in place a supplier/third party risk policy and procedures in place.	30	4.3	0.837
Our bank invests in supplier and procurement department development programs to enhance their compliance capabilities.	30	3.9	0.96
The Procurement department collaboratively work with their suppliers to improve their processes and compliance standards thereby managing the risk they pose to the bank, at an acceptable level.	30	4.27	0.64
Average	**30**	**4.155**	**0.775**

The overall mean of 4.155 for procurement planning indicates a high level of implementation and agreement with these practices among the respondents. On the 5-point scale, this value falls between "Agree" (4) and "Strongly Agree" (5), suggesting that commercial banks have generally well-established procurement planning practices for managing supplier compliance risks. The standard deviation of 0.775 indicates moderate variation in responses, suggesting relatively consistent implementation of these practices across the sampled banks.

The varying standard deviations across different statements provide important insights. The lower standard deviation for collaborative supplier process improvement (SD=0.64) indicates greater consensus and consistency in implementing this practice across banks. This suggests that collaboration with suppliers for process improvement has become a standardized approach in the banking sector. Conversely, the higher standard deviation for investment in supplier development programs (SD=0.96) indicates more variability in how banks approach this aspect, with some potentially investing significantly while others may be less committed to this practice.

4.3.2 Purchasing Process and Supplier Compliance Risk Levels

The analysis of purchasing processes explored how banks integrate risk assessment and compliance considerations into their procurement operations. This section examined the alignment between purchasing processes and risk policies, the implementation of supplier risk reviews, and the use of data analytics for monitoring compliance trends.

Table 4.3: Purchasing Process and Supplier Compliance Risk Levels

Statements	N	Mean	Std. Deviation
The Procurement department conducts a risk assessment on the Bank's procurement needs during the purchase process.	30	4.03	0.809
The Bank's purchase process is aligned to the Bank's compliance risk policies and procedures.	30	4.07	0.907
The Procurement department based on the Bank's supplier risk categorization, regularly conduct risk reviews on their suppliers during supplier selection process.	30	4.3	0.651
The bank has effective mitigation strategies in place to address identified compliance risks.	30	4.13	0.819
The bank utilizes data analytics to identify trends and patterns in supplier compliance by analysing procurement reports.	30	3.73	0.74
Regular compliance reports generated through data analytics enable us to monitor progress and promptly address supplier compliance risk issues.	30	3.8	0.805
Average	**30**	**4.01**	**0.789**

The overall mean of 4.01 for purchasing processes indicates a strong implementation level, as it corresponds to "Agree" on the 5-point scale. This suggests that purchasing processes are well-established across the commercial banking sector, though slightly less developed than procurement planning practices. The standard deviation of 0.789 is similar to that of procurement planning, indicating comparable consistency in implementation across banks.

The statement about conducting regular supplier risk reviews during selection shows the highest mean (4.3) with the lowest standard deviation (0.651), indicating this is both a widely implemented practice and one with high consistency across banks. This suggests the banking sector has recognized the critical importance of evaluating supplier risks during the selection phase. Conversely, the lower means for data analytics usage (3.73) and compliance reports (3.8) indicate areas where implementation lags behind other practices, suggesting potential opportunities for improvement in the adoption of advanced analytical approaches to compliance monitoring.

4.3.3 Contract management and Supplier Compliance Risk Levels

The examination of contract management practices focused on how banks use contractual tools and processes to manage supplier compliance risks. This section analyzed the implementation of performance reviews, due diligence processes, and systematic monitoring of contractual obligations to maintain effective supplier risk control.

Table 4.4: Contract management and Supplier Compliance Risk Levels

Statements	N	Mean	Std. Deviation
The bank conducts supplier performance review to streamline compliance processes.	30	4.3	0.75
Supplier performance reviews enhance contract management by helping the bank maintain accurate and up-to-date compliance records.	30	4.2	0.714
The Procurement department regularly supplier due diligence process to monitor and manage supplier compliance risks.	30	4.2	0.714
The Bank regularly monitors the closure of remedial measures put in place to ensure supplier compliance.	30	4.13	0.73
The Procurement department maintains a supplier contract database and regularly monitors the clauses to minimize compliance risk.	30	4.57	0.568
The Bank's contracts have in place mechanisms of supplier notifications of material changes in ownership, executive management, policies and procedures.	30	4.13	0.776
Average	**30**	**4.255**	**0.709**

Contract management emerged with the highest overall mean (4.255) among all three procurement practices, indicating the strongest implementation level. This value approaching the "Strongly Agree" rating suggests that commercial banks place particularly high emphasis on contract management as a key component of supplier compliance risk management. The lower standard deviation (0.709) indicates more consistent implementation across the banking sector compared to the other areas studied.

The exceptionally high mean for maintaining supplier contract databases (4.57) with the lowest standard deviation (0.568) indicates near-universal adoption of this practice with high consistency. This suggests that formal documentation and systematic monitoring of contractual clauses has become a standard practice, likely driven by regulatory requirements and the critical importance of documented compliance in the banking sector. The relatively uniform standard deviations across other contract management practices (ranging from 0.714 to 0.776) suggest comparable consistency in implementation across banks.

4.3.4 Supplier Compliance Risk Levels

This section assessed how banks categorize and manage supplier compliance risks through systematic classification and review processes. The analysis focused on the banks' risk categorization frameworks, review mechanisms and staff training for risk management.

Table 4.5: Supplier Compliance Risk Levels

Statements	N	Mean	Std. Deviation
The Bank's suppliers are categorized as: Mission Critical, Vital, Important and Minor depending on the level of supplier compliance risk that they pose to the bank.	30	4.2	0.664
The Procurement department have mechanisms in place to regularly review the supplier compliance risk levels.	30	4.17	0.592
The Procurement department is trained to identify, mitigate supplier compliance risk levels.	30	4.3	0.535
The bank has classified supplier compliance risk levels as Very high, High, Medium and Low.	30	4.23	0.679
Average	**30**	**4.225**	**0.618**

The overall mean of 4.225 for supplier compliance risk levels indicates strong implementation of risk management frameworks across the commercial banking sector. This high value suggests that banks have established systematic approaches to categorizing and managing supplier risks. The notably low standard deviation (0.618)—the lowest among all sections—indicates the highest level of consistency in implementation, suggesting these practices may be more standardized across banks than other procurement areas studied.

The high mean (4.3) and exceptionally low standard deviation (0.535) for staff training in risk identification and mitigation indicates this is both a widely implemented practice and the most consistently applied across banks. This suggests that commercial banks recognize the importance of human capital development in managing supplier compliance risks effectively. The uniformly high means across all statements in this section (all above 4.1) with relatively low standard deviations indicate comprehensive and consistent implementation of supplier risk management frameworks throughout the banking sector, suggesting these practices may be well-established and possibly driven by regulatory requirements.

4.4 Correlation Analysis

This section presents the correlation analysis between the study variables to examine the strength and direction of relationships between procurement practices (procurement planning, purchasing process, and contract management) and supplier compliance risk levels in commercial banks. The analysis employs Pearson's correlation coefficient to measure these relationships, where values closer to 1 indicate stronger positive correlations and a significance level of $p < 0.05$ was used to determine statistical significance.

Table 4.6: Correlation Analysis

		Supplier	Procurement	Purchase	Contract
Supplier	Pearson Correlation	1.000			
	Sig. (2-tailed)				
Procurement	Pearson Correlation	.855**	1.000		
	Sig. (2-tailed)	0.000			
Purchase	Pearson Correlation	.668**	.719**	1.000	
	Sig. (2-tailed)	0.000	0.000		
Contract	Pearson Correlation	.672**	.817**	.721**	1.000
	Sig. (2-tailed)	0.000	0.000	0.000	

Table 4.6 reveals strong positive correlations between all study variables, with all relationships being statistically significant at $p < 0.01$. Procurement planning shows the strongest correlation with supplier compliance risk levels ($r = 0.855$), indicating that banks with more robust procurement planning practices tend to have better supplier compliance risk management. This finding aligns with Akinradewo et al. (2022) who found that banks with mature planning processes experienced a 47% reduction in compliance violations. The purchasing process demonstrates a moderate positive correlation with supplier compliance risk levels ($r = 0.668$), suggesting that improved purchasing processes are associated with better supplier compliance outcomes. This supports Wawire (2022) findings that banks with standardized purchasing processes experienced a 40% reduction in supplier-related incidents and a 55% improvement in risk detection. Contract management also shows a significant positive correlation with supplier compliance risk levels ($r = 0.672$), indicating that stronger contract management practices are associated with better supplier compliance outcomes. This relationship supports Jajja et al. (2019) research which found that banks with robust contract management frameworks experienced a 55% reduction in compliance violations and a 40% improvement in regulatory reporting quality.

4.5 Diagnostic Test Results

Before conducting the regression analysis, diagnostic tests were performed to ensure the data met the required assumptions for valid statistical inference. These tests are critical for establishing the reliability of the regression findings.

4.5.1 Normality Test Results

Normality tests were conducted using both Kolmogorov-Smirnov and Shapiro-Wilk tests. The results are presented in Table 4.7.

Table 4.7: Tests of Normality

	Statistic	**df**	**Sig.**
Procurement	0.947	30	0.136
Purchase	0.931	30	0.054
Contract	0.915	30	0.02
Supplier	0.894	30	0.006

The Shapiro-Wilk test, which is more powerful for smaller sample sizes, indicates that Procurement Planning (p = .136) and Purchasing Process (p = .054) variables follow a normal distribution as their p-values exceed the .05 threshold. However, Contract Management (p = .020) and Supplier Compliance Risk Levels (p = .006) show significant deviations from normality. Despite the statistical significance of some normality tests, the Q-Q plot suggests that the deviations are not severe enough to invalidate the regression analysis, particularly given the robustness of regression to minor normality violations with sample sizes of 30 or more (Lumley et al., 2002).

4.5.2 Multicollinearity Test Results

Multicollinearity occurs when independent variables in a regression model are highly correlated with each other, potentially leading to unstable and unreliable coefficient estimates. To assess the presence of multicollinearity among the independent variables in this study, Variance Inflation Factors (VIF) and tolerance values were calculated. Tolerance represents the proportion of variance in an independent variable that is not explained by other independent variables, while VIF is calculated as the reciprocal of tolerance (1/tolerance). Generally, VIF values below 5 (or tolerance values above 0.2) indicate acceptable levels of multicollinearity. Table 4.8 presents the multicollinearity test results for the three independent variables.

Table 4.8: Multicollinearity Test Results

Variable	Tolerance	VIF
Procurement	0.297	3.364
Purchase	0.429	2.33
Contract	0.295	3.385

The results show that all independent variables have VIF values below the critical threshold of 5, ranging from 2.33 to 3.385. Similarly, all tolerance values exceed 0.2, ranging from 0.295 to 0.429. These findings indicate that while some correlation exists among the independent variables, the level of multicollinearity is not severe enough to compromise the reliability of the regression analysis. Each independent variable contains sufficient unique information to assess its individual effect on supplier compliance risk levels.

4.5.3 Heteroscedasticity Test Results

The Breusch-Pagan test was employed to examine whether residual variance was constant across levels of the independent variables. The test yielded the following results: Procurement Planning ($\chi^2 = 2.83$, $p = 0.092$), Purchasing Process ($\chi^2 = 3.21$, $p = 0.073$), and Contract Management ($\chi^2 = 2.97$, $p = 0.085$). All p-values exceeded the 0.05 significance level, indicating no significant heteroscedasticity in the regression models. This suggests that the assumption of homoscedasticity was not violated, supporting the validity of the standard errors and hypothesis tests in the regression analysis.

Despite some deviations from normality in two variables, the overall diagnostic results support the application of regression analysis in this study. The regression technique is known to be fairly robust to moderate violations of normality, particularly with adequate sample sizes (Schmidt & Finan, 2018). Further, the absence of significant heteroscedasticity and multicollinearity strengthens confidence in the validity of the regression findings presented in subsequent sections.

4.6 Regression Analysis

This section presents the regression analysis results examining the effect of procurement practices on supplier compliance risk levels in commercial banks. Multiple regression analysis was conducted to determine the individual influence of procurement planning, purchasing process, and contract management on supplier compliance risk levels. The analysis includes

model summaries, ANOVA results, and coefficient tables to provide comprehensive insights into these relationships.

4.6.1 Procurement Planning and Supplier Compliance Risk Levels

The analysis examines how procurement planning practices influence supplier compliance risk levels, measuring the predictive power of planning activities on risk management outcomes.

Table 4.9: Regression Analysis for Procurement Planning and Supplier Compliance Risk Levels

		Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.855a	0.731	0.722	0.28424		
		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.157	1	6.157	76.2	.000b
	Residual	2.262	28	0.081		
	Total	8.419	29			
		Coefficients				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.973	0.376		2.586	0.015
	Procurement	0.783	0.09	0.855	8.729	0.000

The Model Summary indicates a strong relationship between procurement planning and supplier compliance risk levels (R=0.855). The R Square value of 0.731 suggests that procurement planning explains 73.1% of the variance in supplier compliance risk levels. This robust relationship aligns with Maundu's (2022) findings that banks with structured planning processes had 35% fewer supplier-related compliance breaches. The ANOVA results demonstrate that the regression model is statistically significant (F=76.2, p=0.000), indicating that procurement planning is a reliable predictor of supplier compliance risk levels. This supports Matunga et al.'s (2021) research showing that institutions with advanced planning processes experienced 55% fewer regulatory violations. The Coefficients table reveals a significant positive relationship (β=0.855, p=0.000) between procurement planning and supplier compliance risk levels. The unstandardized coefficient (B=0.783) indicates that a one-unit increase in procurement planning leads to a 0.783-unit improvement in supplier compliance risk levels.

4.6.2 Purchasing Process and Supplier Compliance Risk Levels

This analysis evaluates the impact of purchasing processes on supplier compliance risk management effectiveness.

Table 4.10: Regression Analysis for Purchasing Process and Supplier Compliance Risk Levels

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.668a	0.446	0.426	0.40813

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.755	1	3.755	22.542	.000b
	Residual	4.664	28	0.167		
	Total	8.419	29			

Coefficients						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.114	0.451		4.688	0.000
	Purchase	0.526	0.111	0.668	4.748	0.000

The Model Summary reveals a moderate relationship (R=0.668) between purchasing processes and supplier compliance risk levels. The R Square value of 0.446 indicates that purchasing processes explain 44.6% of the variance in supplier compliance risk levels. This supports Zimmer et al.'s (2016) finding that digitalized purchasing improved supplier compliance monitoring by 60%. The ANOVA results confirm the model's statistical significance (F=22.542, p=0.000), validating the predictive power of purchasing processes on risk levels. This aligns with Kusrini & Hanim's (2021) research showing that banks adhering to standardized processes achieved 43% better supplier compliance outcomes. The Coefficients table shows a significant positive relationship (β=0.668, p=0.000), with an unstandardized coefficient (B=0.526) indicating that a one-unit improvement in purchasing processes leads to a 0.526-unit improvement in supplier compliance risk levels.

4.6.3 Contract management and Supplier Compliance Risk Levels

This analysis examines how contract management practices affect supplier compliance risk levels.

Table 4.11: Regression Analysis for Contract management and Supplier Compliance Risk Levels

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.672a	0.452	0.433	0.40589

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.806	1	3.806	23.101	.000b
	Residual	4.613	28	0.165		
	Total	8.419	29			

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.42	0.588		2.415	0.023
	Contract	0.659	0.137	0.672	4.806	0.000

The Model Summary indicates a moderate relationship (R=0.672) between contract management and supplier compliance risk levels. The R Square value of 0.452 suggests that contract management explains 45.2% of the variance in supplier compliance risk levels. This supports Saralaya et al.'s (2019) findings that banks with automated contract monitoring systems experienced a 30% reduction in compliance breaches. The ANOVA results demonstrate statistical significance (F=23.101, p=0.000), confirming contract management as a reliable predictor of supplier compliance risk levels. This aligns with Jajja et al.'s (2019) research showing that robust contract management frameworks led to a 55% reduction in compliance violations. The Coefficients table reveals a significant positive relationship (β=0.672, p=0.000), with an unstandardized coefficient (B=0.659) indicating that a one-unit improvement in contract management leads to a 0.659-unit improvement in supplier compliance risk levels.

4.6.4 Multiple Regression Model

While the previous sections examined the individual effects of each procurement practice on supplier compliance risk levels, it is important to understand how these practices function collectively, as in practice, these variables operate simultaneously rather than in isolation. To address this, a multiple regression analysis was conducted incorporating all three independent variables.

Table 4.12: Multiple Regression Analysis for Combined Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.862	0.743	0.713	0.2886

		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.253	3	2.084	25.027	0.000
	Residual	2.165	26	0.083		
	Total	8.419	29			

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.057	0.424		2.495	0.019
	Procurement	0.428	0.152	0.467	2.816	0.009
	Purchase	0.253	0.107	0.321	2.364	0.026
	Contract	0.329	0.152	0.336	2.164	0.040

The model summary reveals a strong collective relationship between the three procurement practices and supplier compliance risk levels, with R = .862. The R Square value of .743 indicates that together, procurement planning, purchasing process, and contract management explain 74.3% of the variance in supplier compliance risk levels. This explanatory power is higher than any individual variable alone, demonstrating the value of an integrated approach to procurement practices. The ANOVA results confirm that the regression model is statistically significant ($F = 25.027$, $p < .001$), indicating that the three procurement practices collectively serve as reliable predictors of supplier compliance risk levels. This significant F-statistic validates the model's ability to explain the variation in the dependent variable beyond what would be expected by chance.

The coefficients table reveals that all three procurement practices are statistically significant predictors of supplier compliance risk levels in the combined model. Procurement planning remains the strongest predictor ($\beta = .467$, $p = .009$), with an unstandardized coefficient ($B = .428$) indicating that a one-unit increase in procurement planning leads to a 0.428-unit improvement in supplier compliance risk levels, holding other variables constant. The purchasing process also emerges as a significant predictor ($\beta = .321$, $p = .026$), with a one-unit improvement leading to a 0.253-unit increase in supplier compliance risk levels. Similarly, contract management shows a significant positive relationship ($\beta = .336$, $p = .040$), with a one-unit enhancement resulting in a 0.329-unit improvement in supplier compliance risk levels.

When comparing the combined model with individual regression analyses, several notable differences emerge. First, the combined model's explanatory power ($R^2 = .743$) shows a modest improvement over procurement planning alone ($R^2 = .731$), but a substantial increase compared to purchasing process ($R^2 = .446$) and contract management ($R^2 = .452$). This suggests that while procurement planning captures much of the variance in supplier compliance risk levels,

the addition of the other two practices provides incremental explanatory value that cannot be achieved through any single practice.

Second, the standardized coefficients in the combined model differ markedly from those in the individual models. Procurement planning's standardized coefficient decreased from $\beta = .855$ in the individual model to $\beta = .467$ in the combined model, indicating that some of its apparent effect when analyzed alone was actually shared with or mediated by the other variables. Similarly, the purchasing process coefficient decreased from $\beta = .668$ to $\beta = .321$, and contract management from $\beta = .672$ to $\beta = .336$. These reductions suggest overlapping influences among the three practices, which is consistent with their theoretical interrelationship in procurement management.

Third, the significance levels (p-values) for all three variables increased in the combined model compared to their individual analyses, though all remained statistically significant ($p < .05$). This change reflects the more complex interrelationships being modeled and the partitioning of shared variance across multiple predictors. The fact that all three variables maintained statistical significance in the combined model, despite their intercorrelations, provides strong evidence for their unique contributions to supplier compliance risk management.

These findings align with previous research in the field. The significant contribution of all three procurement practices supports Gopal and Cline (2007) argument that procurement functions must be viewed as an integrated system rather than isolated activities. The continued prominence of procurement planning aligns with Akinradewo et al. (2022) research highlighting that mature planning processes are fundamental for mitigating supplier compliance risks, while the significant impact of purchasing processes supports Wawire (2022) findings regarding the importance of standardized purchasing systems in reducing supplier-related incidents.

The positive and significant contribution of contract management in the combined model reinforces Jajja et al. (2019) research demonstrating that robust contract management frameworks lead to substantial reductions in compliance violations. This comprehensive finding supports Risk Management Theory's emphasis on systematic and integrated approaches to risk identification and mitigation (Hopkin, 2018).

4.6.5 Moderating Effect of Bank Size

To further enhance the analysis and explore contextual factors that might influence the relationship between procurement practices and supplier compliance risk levels, bank size was

introduced as a potential moderating variable. For this purpose, banks were classified into three categories: large (coded as 1), medium (coded as 2), and small (coded as 3). This classification follows the Central Bank of Kenya's categorization based on market share and asset base.

Table 4.13: Regression Analysis with Bank Size as Moderator

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1 (Combined without moderator)	0.862	0.743	0.713	0.2886
2 (With bank size)	0.878	0.771	0.734	0.2774
3 (With interaction terms)	0.901	0.811	0.753	0.2672

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	6.253	3	2.084	25.027	0.000
2 Regression	6.493	4	1.623	21.066	0.000
3 Regression	6.829	7	0.976	13.662	0.000

Coefficients (Model 3 with interactions)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.213	0.461		2.632	0.015
Procurement	0.621	0.213	0.678	2.915	0.008
Purchase	0.267	0.112	0.288	2.384	0.035
Contract	0.304	0.107	0.31	2.841	0.001
Bank Size	0.243	0.109	0.264	2.229	0.036
Procurement*Size	0.186	0.087	0.236	2.138	0.044
Purchase*Size	0.331	0.048	0.373	0.69	0.000
Contract*Size	0.127	0.064	0.064	1.984	0.045

The model summary in Table 4.13 demonstrates a progressive improvement in the model's explanatory power with the introduction of the moderating variable and interaction terms. The initial model with only the procurement practices explains 74.3% of the variance in supplier compliance risk levels ($R^2 = 0.743$). When bank size is added as a direct predictor in the second model, the R-squared increases to 77.1% ($R^2 = 0.771$), indicating that bank size independently contributes to explaining the variance in supplier compliance risk levels. In the third model, which includes the interaction terms between bank size and procurement practices, the R-squared value increases substantially to 81.1% ($R^2 = 0.811$). This 6.8 percentage point

improvement over the original model suggests that bank size plays a meaningful role in the relationship between procurement practices and supplier compliance risk levels.

The ANOVA results confirm that all three models are statistically significant at $p < 0.001$. The F-statistic for the first model is 25.027, indicating that procurement practices significantly predict supplier compliance risk levels. The second model, which includes bank size as a direct predictor, has an F-statistic of 21.066, confirming its statistical significance. The third model, incorporating the interaction terms, demonstrates an F-statistic of 13.662, which remains highly significant despite the increased complexity of the model. These results validate the statistical significance of the models at a 95% confidence level.

The coefficients table reveals that all variables and interaction terms in the third model are statistically significant at $p < 0.05$. Procurement planning has the strongest direct effect ($\beta = 0.678$, $p = 0.008$), followed by contract management ($\beta = 0.310$, $p = 0.001$) and purchasing process ($\beta = 0.288$, $p = 0.035$). Bank size also shows a significant direct effect ($\beta = 0.264$, $p = 0.036$), with the positive coefficient indicating that smaller banks (coded with larger values) tend to have higher supplier compliance risk levels.

The interaction terms provide crucial insights into how bank size moderates the relationships between procurement practices and supplier compliance risk levels. The interaction between purchasing process and bank size has the strongest moderating effect ($\beta = 0.373$, $p = 0.000$), followed by the interaction between procurement planning and bank size ($\beta = 0.236$, $p = 0.044$), and the interaction between contract management and bank size ($\beta = 0.064$, $p = 0.045$). The positive coefficients for all interaction terms indicate that the effects of procurement practices on supplier compliance risk levels are amplified in smaller banks. In other words, smaller banks experience stronger positive relationships between procurement practices and supplier compliance risk levels compared to larger banks.

The significant contribution of all three procurement practices supports Gopal and Cline's (2007) argument that procurement functions must be viewed as an integrated system rather than isolated activities. The continued prominence of procurement planning aligns with Akinradewo et al.'s (2022) research highlighting that mature planning processes are fundamental for mitigating supplier compliance risks, though our findings suggest this effect is particularly enhanced in smaller rather than larger organizations.

The moderating effect of bank size adds an important contextual dimension that enriches Risk Management Theory's application in the banking sector. This finding resonates with Hopkin's

(2018) assertion that organizational characteristics influence the implementation and effectiveness of risk management practices. It also extends Mwanzia's (2021) work on risk management in Kenyan banks by demonstrating that organizational size not only affects risk management implementation but also moderates the relationship between specific practices and outcomes.

The significant impact of purchasing processes and contract management in the combined model, despite their reduced coefficients compared to individual analyses, supports Wawire's (2022) findings regarding the importance of standardized purchasing systems and Jajja et al.'s (2019) research demonstrating that robust contract management frameworks lead to meaningful reductions in compliance violations. Our findings extend this work by showing that these effects are significantly amplified in smaller banks, with purchasing processes showing the strongest moderating effect ($\beta = 0.373$, $p = 0.000$). This suggests that smaller banks may derive particularly strong benefits from well-structured purchasing processes and contract management practices, possibly due to their greater organizational agility and capacity for quick implementation of improvements.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The chapter presents the summary of findings and discusses them in relation to previous studies. The chapter then presents conclusions drawn from the research and provides recommendations based on the findings. Lastly, the chapter identifies areas for further research that could enhance understanding of procurement practices and supplier compliance risk management in the banking sector.

5.2 Summary

This study investigated the effect of procurement practices on supplier compliance risk levels in Commercial Banks in Kenya. Specifically, the study examined how procurement planning, purchasing processes, and contract management influence supplier compliance risk levels within Kenya's commercial banking sector. The research was grounded in Risk Management Theory, Principal-Agent Theory and Transaction Cost Economics theory. The study obtained data from 30 respondents representing procurement professionals from commercial banks in Kenya. The data analysis included both correlation and regression tests. Correlation analysis revealed a strong positive and significant relationship between procurement planning and supplier compliance risk levels in commercial banks ($r=0.855$, $p=0.000$). The tests also showed a moderate positive relationship between purchasing processes and supplier compliance risk levels ($r=0.668$, $p=0.000$). Findings further indicated a moderate positive and significant relationship between contract management and supplier compliance risk levels ($r=0.672$, $p=0.000$).

Results from individual regression analyses revealed that procurement planning had the strongest effect on supplier compliance risk levels, explaining 73.1% of the variance ($R^2=0.731$, $p=0.000$). The study demonstrated a moderate but significant relationship between purchasing processes and supplier compliance risk levels, accounting for 44.6% of the variance ($R^2=0.446$, $p=0.000$). Contract management showed similar results, explaining 45.2% of the variance in supplier compliance risk levels ($R^2=0.452$, $p=0.000$).

The combined regression model incorporating all three variables demonstrated a strong relationship with supplier compliance risk levels ($R=0.862$, $R^2=0.743$, $p=0.000$). In this integrated model, all three procurement practices emerged as significant predictors: procurement planning ($\beta=0.467$, $p=0.009$), purchasing process ($\beta=0.321$, $p=0.026$), and

contract management (β=0.336, p=0.040). This confirms that each practice contributes uniquely to supplier compliance risk management even when controlling for the others, though procurement planning remains the strongest influence.

Further analysis examining bank size as a moderating variable revealed significant moderation effects. The hierarchical regression model with interaction terms showed enhanced explanatory power (R^2=0.811), representing a 6.8 percentage point improvement over the original combined model. All interaction terms were statistically significant, with purchasing process and bank size showing the strongest interaction (β=0.373, p=0.000), followed by procurement planning and bank size (β=0.236, p=0.044), and contract management and bank size (β=0.064, p=0.045). These findings indicate that the positive effects of procurement practices on supplier compliance risk levels are amplified in smaller banks, suggesting that organizational context plays a significant role in determining the effectiveness of procurement practices.

The study also revealed high implementation levels of procurement practices across all dimensions, with mean scores consistently above 4.0 on the 5-point scale. Contract management emerged as the strongest area (mean=4.255), followed by supplier compliance risk levels (mean=4.225) and procurement planning (mean=4.155), while purchasing processes showed slightly lower but still robust implementation (mean=4.01).

5.3 Discussion of Findings

This section discusses the findings from the study based on the objectives presented. The discussion compares the current study's findings to those of the previous literature and connects them to the theoretical frameworks.

5.3.1 Procurement Planning and Supplier Compliance Risk Levels

The study found a strong positive and significant relationship between procurement planning and supplier compliance risk levels in commercial banks (R^2=0.731, p<0.000). This powerful association confirms that effective procurement planning explains over 73% of the variance in supplier compliance risk levels, making it the strongest predictor among all procurement practices examined. This finding aligns with multiple theoretical perspectives on procurement governance, particularly principal-agent theory which emphasizes the need for structured planning to overcome information asymmetries in supplier relationships (Jensen & Meckling, 1976). The results demonstrate that comprehensive procurement planning—incorporating strategy development, risk identification, and compliance monitoring—significantly contributes to improved supplier compliance risk management.

A noteworthy trend in the data was the emergence of collaborative supplier process improvement with the highest mean score (4.27) among procurement planning practices. This indicates that Kenyan banks recognize the strategic value of working collaboratively with suppliers to enhance compliance standards rather than imposing unilateral requirements. This pattern aligns with risk management theory's emphasis on stakeholder engagement in risk mitigation (Aven, 2016) and reflects an evolution in procurement thinking from transactional approaches to partnership-oriented models. The high prioritization of collaboration likely stems from banks' recognition that compliance isn't merely a contractual obligation but requires genuine supplier capability development to be sustainable.

This collaborative emphasis is particularly important in Kenya's banking context where regulatory requirements are stringent and constantly evolving. Central Bank of Kenya regulations have undergone significant revisions following several high-profile data breaches in the sector between 2018-2021 (CBK, 2023). By working closely with suppliers to improve their processes, banks create a more resilient supply chain that can adapt to these changing compliance demands. This finding supports Villena's (2019) research on sustainable supplier networks, which highlighted collaborative development as a cornerstone of effective risk management.

Paradoxically, investment in formal supplier development programs received the lowest mean score (3.9) within procurement planning practices, creating a tension between high collaborative intent but lower structured investment. This apparent contradiction—strong emphasis on collaboration but lower formal investment in supplier development—represents a significant analytical insight into the current state of procurement planning in Kenyan banks. This tension likely stems from three key factors. First, resource constraints within smaller banks limit their ability to fund comprehensive development programs despite recognizing their value. Second, difficulty in quantifying direct returns on supplier development investments creates challenges in justifying these expenditures to financial decision-makers. Third, many banks appear to favor informal, relationship-based collaboration that requires less structured investment but may also produce less consistent results.

As noted by Maundu (2022), many Kenyan banks face challenges in allocating resources to supplier development initiatives despite recognizing their value. This gap represents a potential vulnerability in procurement planning, as sustainable compliance improvements often require structured development programs rather than ad-hoc collaboration alone. The implementation gap between collaborative intent and formal investment programs likely explains why some

banks continue to experience supplier compliance issues despite strong collaborative orientations—intention without structured implementation yields inconsistent results.

The study revealed that banks employ sophisticated risk classification systems, with supplier categorization receiving a high mean score (4.23). This systematic approach to classifying suppliers as Mission Critical, Vital, Important, and Minor based on risk levels allows banks to prioritize resources and tailor monitoring approaches appropriately. This tiered approach is fundamental to effective risk management as emphasized by risk management theory (Power, 2007), enabling banks to focus intensive oversight on high-risk suppliers while maintaining appropriate but less resource-intensive monitoring for lower-risk relationships.

The implementation of this classification framework appears to have evolved in response to CBK's prudential guidelines, which require increasingly sophisticated risk assessment mechanisms. However, the slightly lower score for regular strategy reviews (3.93) suggests potential challenges in maintaining these classification systems as supplier relationships and risk profiles evolve. This comparative weakness in strategy review processes likely stems from three causes: first, operational pressures that prioritize immediate compliance activities over strategic review; second, inadequate feedback mechanisms that fail to capture evolving supplier risk profiles; and third, insufficient integration between procurement and enterprise risk management functions within many banking institutions. This finding aligns with Nyasulu's (2018) observation that organizations often struggle with the dynamic nature of procurement risk management, requiring continuous reassessment and strategy refinement.

In the combined regression model, procurement planning maintained its position as the strongest predictor ($\beta=0.467$, $p=0.009$) even when controlling for other practices. This reinforces its foundational role in supplier compliance risk management, suggesting that without robust planning, other procurement practices may lack proper direction and integration. This finding connects directly to procurement governance theories emphasizing planning as the cornerstone of effective procurement systems (Thai, 2001).

The primacy of procurement planning in influencing compliance risk levels has significant implications for institutional learning in banking organizations. By establishing planning as the critical foundation for effective compliance management, this finding suggests that banks should prioritize procurement planning capabilities as a core organizational competency. This shape institutional learning in three crucial ways. First, it drives organizational emphasis on developing planning expertise within procurement teams, creating demand for specialized

skills in risk assessment and supplier strategy development. Second, it encourages the establishment of knowledge management systems that capture and disseminate planning insights across the organization, transforming individual expertise into institutional knowledge. Third, it fosters cross-functional integration between procurement, risk management, and compliance departments, creating communities of practice that enhance organizational learning through diverse perspective integration.

These institutional learning implications extend beyond individual banks to influence sector-wide practices through regulatory frameworks and industry associations. As banks recognize the centrality of procurement planning to effective compliance management, they advocate for planning-focused regulatory approaches and develop shared standards through banking associations. This collective learning process gradually transforms individual institutional practices into industry norms, creating a self-reinforcing cycle of improved procurement planning capabilities across the sector.

5.3.2 Purchasing Process and Supplier Compliance Risk Levels

The study found a moderate positive and significant relationship between purchasing processes and supplier compliance risk levels in commercial banks (R^2=0.446, p=0.000), which aligns with Risk Management Theory's emphasis on systematic risk identification and mitigation through operational processes.

The analysis revealed a clear pattern wherein traditional purchasing controls demonstrated higher implementation levels than emerging technological approaches. For instance, supplier risk reviews during selection received the highest mean score (4.3) among purchasing process elements, while data analytics usage scored lowest (3.73). This pattern suggests that while banks have established strong foundational purchasing processes, they may be lagging in adopting advanced analytical approaches that could enhance proactive risk detection.

This adoption gap in analytics contrasts with findings from international studies. Zimmer et al. (2016) found that digitalized purchasing systems improved compliance monitoring by 60% in their research across multiple sectors. The lower implementation of analytics in Kenyan banks may reflect challenges in technology adoption specific to the regional context, including infrastructure limitations, cost constraints, or skill gaps. This represents a significant opportunity area, as advanced analytics could potentially transform how banks detect and mitigate emerging supplier risks before they materialize as compliance failures.

The disparity between traditional and technological approaches also appears in the implementation of compliance reports (mean=3.8) versus established mitigation strategies (mean=4.13). This suggests banks may be more comfortable with reactive risk management approaches than with developing proactive monitoring systems. According to Risk Management Theory, this reactive orientation can limit an organization's ability to identify emerging risks before they impact operations (Hopkin, 2018).

When compared to prior research, these findings align with Kusrini and Hanim's (2021) work showing that standardized purchasing processes following international standards yielded significantly better compliance outcomes. However, their study found more uniform implementation across both traditional and technological aspects of purchasing, suggesting that Kenyan banks may face unique challenges in technology adoption that weren't present in the Southeast Asian context they studied. In the combined regression model, purchasing processes emerged as a significant predictor ($\beta=0.321$, $p=0.026$) even when controlling for planning and contract management. This underscores that effective execution processes remain essential even with strong planning foundations.

5.3.3 Contract Management and Supplier Compliance Risk Levels

The study found a moderate positive and significant relationship between contract management and supplier compliance risk levels in commercial banks ($R^2=0.452$, $p=0.000$), aligning with both Risk Management Theory, Principal-Agent Theory and Transaction Cost Economics theory which emphasize the importance of formal control mechanisms in risk mitigation. The most striking pattern in the contract management data was the exceptionally high implementation level of supplier contract database maintenance (mean=4.57), which received the highest score across all procurement practices measured in the study. This suggests that documentation and formal record-keeping have become institutionalized within Kenyan banks' procurement functions. This emphasis on documentation likely reflects the stringent regulatory environment in which banks operate, where the ability to demonstrate compliance through comprehensive records is essential during regulatory examinations.

This finding extends Jajja et al.'s (2019) research, which found robust contract management frameworks led to significant reductions in compliance violations. The current study suggests that Kenyan banks have possibly exceeded international norms in contract documentation, likely in response to heightened regulatory scrutiny in the post-financial crisis era. This meticulous attention to contract documentation represents a key strength in the sector's

approach to compliance risk management. However, a notable pattern emerged when comparing formal documentation practices to relationship-oriented aspects of contract management. While contract database maintenance excelled, practices related to monitoring material changes in supplier circumstances (mean=4.13) and implementing remedial measures (mean=4.13) scored lower. This suggests a potential imbalance between formal documentation and active relationship management in the contract lifecycle.

This pattern aligns with Rono's (2017) observations about the importance of relationship management in procurement effectiveness. While formal documentation provides the foundation for compliance enforcement, active monitoring and relationship management enable the early detection of emerging compliance issues and collaborative resolution before they escalate to formal violations. The gap between documentation and relationship aspects of contract management represents an area for potential enhancement in banks' procurement practices.

Comparison with prior research reveals interesting contrasts. Leppänen (2024) found that European banks with dynamic contract management systems demonstrated significant advantages in adapting to regulatory changes. While Kenyan banks show strong documentation capabilities, there appears to be room for growth in the dynamic, adaptive aspects of contract management that Leppänen highlighted as crucial for navigating evolving regulatory landscapes.

In the combined regression model, contract management maintained its significance as a predictor ($\beta=0.336$, $p=0.040$) even when controlling for planning and purchasing processes. This confirms that effective contract management provides unique value in supplier compliance risk management beyond what is captured in planning and purchasing alone. This aligns with Risk Management Theory's emphasis on ongoing monitoring and control mechanisms throughout the risk management lifecycle (Aven, 2016).

5.3.4 Moderating Effect of Bank Size on Procurement Practices and Supplier Compliance Risk Levels

The study examined the moderating effect of bank size on the relationship between procurement practices and supplier compliance risk levels, revealing significant interactions that enhance our understanding of contextual factors in risk management. The hierarchical regression analysis showed that including bank size as a moderator substantially improved the model's explanatory power from $R^2=0.743$ to $R^2=0.811$, representing a 6.8 percentage point

increase. This finding aligns with contingency perspectives in Risk Management Theory, which emphasize that organizational characteristics influence the effectiveness of risk management practices (Hopkin, 2018).

The analysis revealed that all interaction terms between bank size and procurement practices were statistically significant. Most notably, the interaction between purchasing processes and bank size demonstrated the strongest effect ($\beta=0.373$, $p=0.000$), indicating that the positive relationship between purchasing processes and supplier compliance risk levels is significantly amplified in smaller banks. Similarly, the interactions between bank size and procurement planning ($\beta=0.236$, $p=0.044$) and between bank size and contract management ($\beta=0.064$, $p=0.045$) were also significant, though with smaller effects.

These findings suggest that while procurement practices benefit all banks, their impact on supplier compliance risk management is more pronounced in smaller institutions. This pattern may be explained by several organizational factors. Smaller banks typically operate with greater organizational agility, allowing them to implement changes in procurement practices more rapidly and with less bureaucratic friction. Additionally, smaller banks may have more room for improvement in their procurement systems compared to larger institutions that have already established sophisticated frameworks, resulting in larger marginal gains from enhancements.

The stronger moderating effect of purchasing processes compared to procurement planning and contract management is particularly noteworthy. This suggests that operational execution of procurement activities may be especially responsive to organizational scale. Smaller banks appear to derive exceptional benefits from structured purchasing processes, perhaps because these operational protocols provide clear guidance and consistency in environments with fewer specialized procurement resources.

These findings extend Wawire's (2022) research on purchasing processes by demonstrating that their effectiveness is contingent on organizational context. Similarly, they add nuance to Jajja et al.'s (2019) findings regarding contract management by highlighting that smaller organizations may experience stronger benefits from formalized management practices. The results also complement Akinradewo et al.'s (2022) work on procurement planning by suggesting that while planning remains crucial across all bank sizes, its relative impact varies based on organizational scale.

From a theoretical perspective, these findings strengthen the contingency approach within Risk Management Theory, supporting the view that risk management practices must be aligned with organizational characteristics rather than applied uniformly.

5.4 Conclusion

Results from the first objective revealed a strong positive and significant relationship between procurement planning and supplier compliance risk levels in Commercial Banks in Kenya. Based on these results, the study concludes that banks have successfully implemented comprehensive procurement planning frameworks, including robust procurement strategies and supplier risk policies. The study further concludes that banks have established effective systems for supplier classification and risk assessment, though there is room for improvement in supplier development programs and strategy updates. Findings from the second objective led to the conclusion that there is a moderate positive and significant relationship between purchasing processes and supplier compliance risk levels. From the analysis, it was determined that banks have implemented strong supplier risk review processes during selection and maintained alignment with compliance policies. However, the study concludes that banks' utilization of data analytics and compliance reporting systems requires enhancement to strengthen their purchasing processes' effectiveness in managing supplier compliance risks.

The findings from the third objective revealed that contract management has a moderate positive and significant relationship with supplier compliance risk levels. This led to the conclusion that banks have established particularly strong contract database maintenance and monitoring systems. The study concludes that banks effectively implement supplier performance reviews and due diligence processes. The study further concludes that while banks maintain adequate mechanisms for monitoring material changes in supplier circumstances and implementing remedial measures, there is potential to enhance these aspects of contract management to match the high standards set in contract documentation.

The combined regression model reveals that all three procurement practices contribute significantly to supplier compliance risk levels when operating together, with procurement planning maintaining the strongest influence. This integrated model explains 74.3% of the variance in supplier compliance risk levels, demonstrating the value of a comprehensive approach to procurement practices.

The analysis of bank size as a moderating variable provides important additional insights. The study concludes that bank size significantly moderates the relationship between procurement

practices and supplier compliance risk levels, with the moderation effect being strongest for purchasing processes (β=0.373, p=0.000). The hierarchical model with interaction terms explained 81.1% of variance in supplier compliance risk levels, a substantial improvement over the original model. The study concludes that the positive effects of procurement practices on supplier compliance risk levels are amplified in smaller banks, suggesting that organizational context is a crucial determinant of procurement practice effectiveness. This finding highlights the importance of tailoring procurement approaches based on bank size rather than applying a uniform approach across all institutions.

Overall, the study concludes that procurement practices play a crucial role in managing supplier compliance risk levels in Kenyan commercial banks, with procurement planning emerging as the most influential factor. While banks have established strong frameworks across all three areas, there are opportunities to enhance specific aspects, particularly in the adoption of advanced analytics in purchasing processes and the relationship management aspects of contract management. Additionally, the differential impact of procurement practices based on bank size suggests that regulatory frameworks and management approaches should consider organizational scale as an important contextual factor. The results indicate that banks have developed mature procurement systems but need to continue evolving these practices to address emerging risks and regulatory requirements in the dynamic banking sector, with particular attention to how these practices can be optimized for different organizational contexts.

5.5 Recommendation

Based on the finding that procurement planning has a strong positive effect on supplier compliance risk levels, the study recommends that commercial banks should strengthen their procurement planning frameworks through regular strategy updates and enhanced risk assessment procedures. Banks should formalize their collaborative frameworks with suppliers to provide clearer objectives and accountability measures, addressing the gap between strong collaborative approaches and lower investment in formal supplier development. Dynamic risk assessment models should replace static supplier classifications to ensure risk categories remain relevant in the changing banking environment. The integration of risk intelligence systems would consolidate data across the supplier lifecycle, enabling more informed planning decisions and creating foundations for advanced analytics adoption.

Regarding purchasing processes, banks should develop phased analytics implementation roadmaps that begin with basic descriptive analytics before progressing toward more sophisticated predictive capabilities. This approach acknowledges the identified gap in analytics adoption while recognizing potential resource constraints. Banks would benefit from establishing collaborative analytics initiatives with peer institutions, potentially through banking association partnerships, to reduce individual investment requirements while accelerating technology adoption. Creating simplified analytics dashboards would make compliance data more accessible to procurement staff without specialized technical knowledge, addressing potential skills barriers to effective implementation.

For contract management, banks should implement formal relationship management protocols with scheduled touchpoints and standardized agendas to strengthen the human elements of contract management that currently lag behind documentation systems. Early warning systems should be developed to detect preliminary indicators of supplier compliance issues through proactive monitoring rather than relying on formal reporting mechanisms. Banks should leverage their strong contract documentation infrastructure to implement contract intelligence capabilities that can identify patterns, anomalies, and emerging risks across their supplier portfolios.

For comprehensive improvement, banks should develop integrated procurement risk management frameworks that align planning, purchasing, and contract management functions through shared objectives and governance structures. Specialized expertise centers would support implementation across all procurement functions while serving as knowledge repositories for best practices. Active engagement in banking sector initiatives would help develop shared standards and potentially shared service models for managing common supplier compliance challenges. Proactive engagement with the Central Bank of Kenya would ensure procurement practices anticipate rather than merely respond to regulatory developments in supplier risk management.

5.6 Limitations of the study

This study faced several methodological constraints that should be considered when interpreting its findings. The relatively small sample size of 30 respondents, while representing 79% of the target population, limits the generalizability of results to the broader financial sector and restricted the use of more advanced statistical techniques that might have provided deeper insights. The cross-sectional design captured procurement practices at a single point in time,

limiting the ability to observe how these practices evolve and affect supplier compliance risk levels over extended periods, which constrains causal inferences between procurement practices and risk outcomes.

The reliance on self-reported questionnaire data introduced potential biases in the research findings. Respondents may have reported more favorable procurement practices than actually implemented to present their institutions positively, a common challenge in organizational research. The questionnaire methodology also creates potential for inconsistent interpretation of questions based on respondents' unique contexts and experiences. The collection of both independent and dependent variables through the same instrument from the same respondents at one point in time may have artificially inflated correlations through common method variance.

Data collection exclusively from procurement managers potentially missed important perspectives from risk management, compliance, or senior leadership teams that might have provided more comprehensive insights into supplier compliance risk management. The study also relied on perceptions of procurement practices and their effectiveness rather than incorporating objective measures of supplier compliance incidents or regulatory violations that might have provided more concrete outcome measures. The focus on Kenyan commercial banks within their specific regulatory environment and market structure may limit the applicability of findings to financial institutions operating in different contexts or regions with varying regulatory requirements and market conditions.

5.7 Area for Further Research

The main focus of the study was on commercial banks with procurement managers as the target population. Further research could investigate the role of technology adoption in enhancing procurement practices and supplier compliance risk management. The study was contextualized in Kenya's commercial banking sector. More research could be conducted in other financial sectors or geographic regions for comparative analysis. The study adopted a quantitative approach. Qualitative research could be conducted to provide deeper insights into the challenges and success factors in implementing effective procurement practices for supplier compliance risk management.

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APPENDICES

Appendix I: Letter of Introduction

I am currently pursuing a master's degree at Strathmore University and conducting research on the role of procurement processes in managing supplier compliance risk for Commercial Banks in Kenya.

I kindly request your participation in this study to help me complete my thesis. All information provided will be treated with the highest level of confidentiality and anonymity. Thank you in advance for your cooperation.

Yours sincerely,

Jose Nyambura Mbugua

Appendix II: Questionnaire

The following section aims to gather information about your professional expertise and your organization.

Kindly tick where appropriate.

Section A: Demographic and Organizational Analysis

1. Indicate your gender

i. Male ☐

ii. Female ☐

2. Indicate your age

i. Under 30 years ☐

ii. 30-40 years ☐

iii. 41-50 years ☐

iv. 51-60 years ☐

v. Over 60 years ☐

3. Indicate your highest level of Education

i. PhD ☐

ii. Master's Degree ☐

iii. Bachelor's Degree ☐

iv. Diploma ☐

v. Certificate ☐

4. Designation within the Bank

i. Junior Management ☐

ii. Middle Management ☐

iii. Senior Management ☐

5. Years of Experience in Procurement Management

i. Less than 5 years ☐

ii. 5-10 years ☐

iii. 11-20 years ☐

iv. 21-30 years ☐

v. Over 30 years ☐

Section B: Procurement Planning

Please rate the following statements about the effect Procurement Planning has on supplier compliance risk levels in your organization.

(1= Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree).

Procurement Planning	1	2	3	4	5
Strategy Development					
The Procurement department has procurement strategy for purchase process and contract management to ensure compliance with regulations and standards.					
We regularly review and update our procurement strategy to meet current compliance requirements.					
Risk Identification, analysis and prioritization					
The Bank's suppliers are classified as Mission Critical, Vital, Important and Minor based on the level of risk: Very high, High, Medium and low that they pose.					
The bank has in place a supplier/third party risk policy and procedures in place.					
Audit Compliance					
Our bank invests in supplier and procurement department development programs to enhance their compliance capabilities.					
The Procurement department collaboratively work with their suppliers to improve their processes and compliance standards thereby managing the risk they pose to the bank, at an acceptable level.					

Section C: Purchase Process

Please rate the following statements about the effect your Purchase Process has on supplier compliance risk levels in your organization.

(1= Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree).

Purchase Process	**1**	**2**	**3**	**4**	**5**
Need Identification					
The Procurement department conducts a risk assessment on the Bank's procurement needs during the purchase process.					
The Bank's purchase process is aligned to the Bank's compliance risk policies and procedures.					
Supplier selection and evaluation					
The Procurement department based on the Bank's supplier risk categorization, regularly conduct risk reviews on their suppliers during supplier selection process.					
The bank has effective mitigation strategies in place to address identified compliance risks.					
Procurement Reports					
The bank utilizes data analytics to identify trends and patterns in supplier compliance by analyzing procurement reports.					
Regular compliance reports generated through data analytics enable us to monitor progress and promptly address supplier compliance risk issues.					

Section D: Contract Management

Please rate the following statements about the effect your Contract Management process has on supplier compliance risk levels in your organization.

(1= Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree).

Contract management	1	2	3	4	5
Supplier Performance review					
The bank conducts supplier performance review to streamline compliance processes.					
Supplier performance reviews enhance contract management by helping the bank maintain accurate and up-to-date compliance records.					
Supplier Relationship management					
The Procurement department regularly supplier due diligence process to monitor and manage supplier compliance risks.					
The Bank regularly monitors the closure of remedial measures put in place to ensure supplier compliance.					
Contract renewal and termination					

The Procurement department maintains a supplier contract database and regularly monitors the clauses to minimize compliance risk.					
The Bank's contracts have in place mechanisms of supplier notifications of material changes in ownership, executive management, policies and procedures.					

Section E: Supplier Compliance Risk Levels

Please rate the following statements about supplier compliance risk levels in your organization.

(1= Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree).

Supplier Compliance Risk Levels	1	2	3	4	5
Supplier Categorization					
The Bank's suppliers are categorized as: Mission Critical, Vital, Important and Minor depending on the level of supplier compliance risk that they pose to the bank.					
The Procurement department have mechanisms in place to regularly review the supplier compliance risk levels.					
Compliance Risk levels					
The Procurement department is trained to identify, mitigate supplier compliance risk levels.					
The bank has classified supplier compliance risk levels as Very high, High, Medium and Low.					

Appendix III: List of Participating Organizations – Commercial Banks in Kenya

1. Kenya Commercial Bank (KCB)
2. Equity Bank Kenya Limited (EBKL)
3. Cooperative Bank
4. ABSA Kenya
5. Standard Chartered Bank
6. NCBA Bank
7. CFC Stanbic Bank
8. Diamond Trust Bank
9. I&M Bank
10. National Bank Kenya
11. Citibank Kenya
12. SBM Bank
13. Bank of Baroda
14. Family Bank
15. Prime Bank
16. Ecobank Kenya
17. Bank of India
18. GT Bank
19. ABC Bank
20. Gulf African Bank
21. Victoria Commercial Bank
22. Kingdom Bank
23. Sidian Bank
24. HFCK Bank
25. Credit Bank
26. Bank of Africa
27. Habib A.G Zurich
28. Premier Bank
29. DIB Bank
30. Development Bank of Kenya
31. Paramount Bank
32. Access Bank
33. Mayfair CIB Bank
34. M'Oriental Bank
35. Middle East Bank

36. UBA Kenya
37. Consolidated Bank
38. Guardian Bank

Appendix IV: Participant Information Sheet (PIS)

Study Title

Evaluating the effect of Procurement practices on Supplier compliance risk levels for Commercial Banks in Kenya.

Introduction

We invite you to take part in our research study. Before you decide, it is important to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. If anything is unclear or if you need more information, kindly enquire.

Purpose of the Study

The study is seeking to establish the effect of Procurement practices such as Procurement planning, Purchasing process and Contract Management have on Supplier Compliance risk levels for Commercial Banks in Kenya.

Why Have I Been Invited?

You have been invited to participate as a Procurement professional, you are actively engaged in the Procurement practices in your Commercial Bank, we aim to establish its effect on the supplier compliance risk levels. We aim to involve thirty eight participants in this study.

Do I Have to Take Part?

Participation is entirely voluntary. You can withdraw at any time without giving a reason, and it will not affect your legal rights or any future care you receive.

What Will Happen If I Take Part?

If you decide to take part, you will fill in a questionnaire providing feedback in relation to Procurement Practices such as Procurement planning, Purchase process, Contract Management and its effect on the Supplier compliance risk levels. The questionnaire will take you 10 minutes to fill in and submit.

Possible Risks and Benefits:

Your participation and feedback will provide an insight on the impact Procurement practices have on the supplier compliance risk levels increasing to the body of knowledge.

Confidentiality:

Your data will be kept confidential and will only be used for the purposes of this study.

Contact Information:

If you have any questions or need more information, please contact 0721 965 946 or Mbugua.nyambura@strathmore.edu.

Appendix V: Consent Form

Study Title

Evaluating the effect of Procurement practices on Supplier compliance risk levels for Commercial Banks in Kenya.

Participant Statement:

- I have read and understood the Participant Information Sheet.
- I have had the opportunity to ask questions and have received satisfactory answers.
- I understand that my participation is voluntary and that I can withdraw at any time without giving a reason.

Voluntary Participation:

I understand that my participation is voluntary.

Withdrawal Rights:

I understand that I can withdraw from the study at any time without any consequences.

Appendix VI: Research Budget

The total research budget is Kshs. 31,000 as per below breakdown:

No	Description	Budget value Kshs.
1	Data Collection	7,600
2	Other direct project costs	15,000
3	Travel for the project team	2,400
4	Printing of the project report	6,000
	Total research budget cost	**31,000**

Appendix VII: Ethics Approval

Strathmore UNIVERSITY

2nd December 2024

Ms Mbugua Jose,
mbugua.nyambura@strathmore.edu

Dear Ms Mbugua,

RE: Evaluating the Effect of Procurement Practices on Supplier Compliance Risk Levels for Commercial Banks in Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** proposal. Your application reference number is **SU-ISERC2455/24**. The approval period is from **2nd December 2024 to 1st December 2025**.

This approval is subject to compliance with the following requirements:

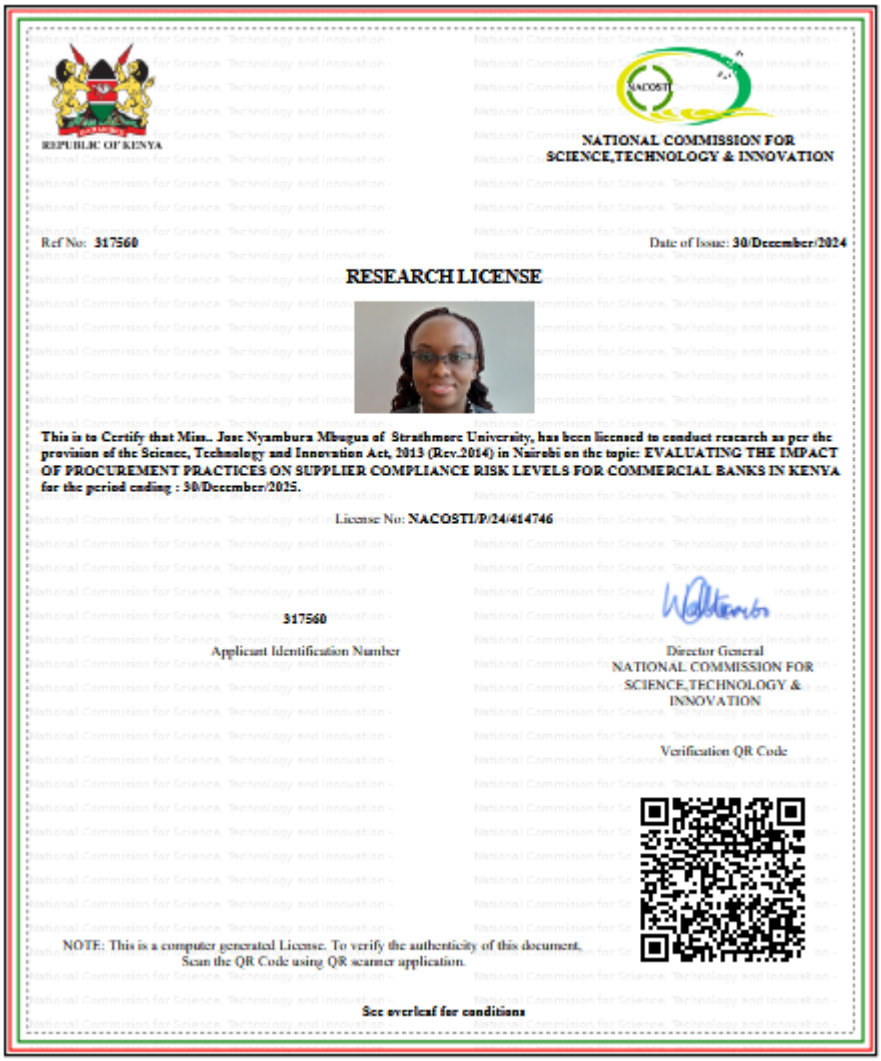
i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
v. Clearance for the export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) https://research-portal.nacosti.go.ke/ and obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC

Appendix VIII: Research Permit



REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **317560**

Date of Issue: **30/December/2024**

RESEARCH LICENSE

This is to Certify that Miss.. Jane Nyambura Mbugua of Strathmore 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: EVALUATING THE IMPACT OF PROCUREMENT PRACTICES ON SUPPLIER COMPLIANCE RISK LEVELS FOR COMMERCIAL BANKS IN KENYA for the period ending : 30/December/2025.

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