

**CONTRACT MANAGEMENT AND CONTRACT PERFORMANCE: A CASE
STUDY OF NATIONAL WATER AND SEWERAGE CORPORATION**

BY

NAMUGABI IMMACULATE

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DECLARATION

I, Namugabi, Immaculate do hereby declare that this dissertation is my original work and has never been submitted for any award in any university or institution of higher learning.

Signature.....Date:

APPROVAL

This is to certify that this dissertation by Namugabi Immaculate has been done under our supervision and is ready for submission for examination with our approval as university supervisors

Sign:Date:

Dr. Peter Wanyama Obanda

Principal Supervisor

Sign:.....Date:

Dr. Noah Mwelu

Second Supervisor

DEDICATION

I dedicate this dissertation to my beloved brother Mr. William Luyinda for his financial and moral support rendered to me throughout my academics.

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I invested a lot of effort in this dissertation since the inception level, however, it would not have been successful without the kind of support and help from my University Supervisors. I would like to convey my sincere gratitude to Dr. Peter Wanyama Obanda and Dr. Noah Mwelu for their professional guidance in developing this dissertation.

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LIST OF ACRONYMS

CMS	Contract Management Systems
CVI	Content Validity Index
EOTs	Extension of Time
GPA	Agreement on Government Procurement
GPS	Global Positioning System
IOT	Internet of Things
KPI	Key Performance Indicators
MDAs	Ministries, Departments, and Agencies
NEMA	National Environment Management Authority
NWSC	National Water and Sewerage Corporation
PDE	Procuring and Disposing Entity
PPDA	Public Procurement and Disposal of Public Assets
SOPs	Standard Operating Procedures
UCMC	Uganda Contracts Monitoring Coalition
WATSAN	Water and Sanitation

ABSTRACT

World over, procurement has sparked a transformation in organizations especially when it comes to contractual relationships with suppliers and service providers for government institutions. However, the dynamics in the operational environment are becoming more challenging for institutions, which greatly affect contract performance. This study examined the effect of contract management on contract performance at National Water and Sewerage Corporation. It was guided by three objectives which included; (i) to examine the relationship between contract risk assessment and contract performance, (ii) to establish the effect of contract administration on contract performance and (iii) to assess the effect contract monitoring on contract performance at NWSC. The study was guided the Agency Theory, which was initially advanced by Ross (1973) and later expanded upon by Jensen and Meckling (1976). The study employed a case study design and data was gathered from a sample of 193 staff from the five departments directly involved in contract management and implementation of NWSC. A mixed method was used. Both primary data and secondary data was gathered using interviews and questionnaires. The study used both qualitative and quantitative approaches for analysis. From the hierarchical regression analysis, it was determined that contract risk assessment had significant influence on contract performance ($\beta = 0.242^{**}$). Similarly, contract administration ($\beta = 0.248^{**}$) and contract monitoring ($\beta = 0.583^{**}$) were found to have a significant effect on contract performance. The study further revealed that contract monitoring is the most significant predictor of the changes in contract performance. Therefore, the study concluded that contracting monitoring was the significant predictor of contract performance. The study recommended that NWSC should integrate systematic risk assessment into the early stages of contract planning. Additionally, NWSC and other agencies should develop and circulate to all staff the Standard Operating Procedures (SOPs) that clearly outline roles, approval steps, documentation requirements, communication channels, and dispute escalation paths. Lastly to enhance transparency and performance tracking, NWSC and other agencies should introduce affordable digital tools such as contract management dashboards, mobile data collection apps, and GPS-enabled field reporting systems to monitor contractor activities in real time.

Key terms: Contract management, contract risk assessment, contract administration, contract monitoring and contract performance

CHAPTER ONE: INTRODUCTION

1.1 Introduction

World over, procurement has sparked a transformation in organizations especially when it comes to contractual relationships with suppliers and service providers for government institutions. However, the dynamics in the operational environment are becoming more challenging for institutions, which greatly affect contract performance. This study therefore sought to examine the effect of contract management on contract performance at National Water and Sewerage Corporation. This chapter included the following; the background of the study, statement of the problem, study objectives, scope of the investigation and conceptual framework.

1.2 Background of the study

1.2.1 Historical background

The concept of contract performance and procurement have evolved significantly over time, reflecting changes in business practices, regulatory environments, and technological advancements.

For instance, in the early 20th century, contract performance was primarily concerned with the fulfillment of contractual obligations in terms of timely delivery and adherence to agreed specifications. However, as business environments became increasingly dynamic, complex and competitive, the focus on contract performance expanded to include aspects such as quality, cost control, risk management, and strategic alignment.

According to Fowler (1993), in the early 20th century, contract performance was largely viewed through the lens of legal compliance and risk mitigation. Contracts were simple, primarily focusing on the delivery of goods and services within specified timeframes and

budgets. The primary concern was to ensure that the terms and conditions agreed upon by the contracting parties were met to avoid disputes and potential litigation.

The perspective changed in the mid-20th century, which marked the beginning of more formalized contract management practices. The rise of large-scale industrial projects, particularly during and after World War II, highlighted the need for more structured approaches to managing contracts. Project management methodologies began to incorporate contract management as a critical component, emphasizing the importance of planning, monitoring, and controlling contract performance (Morris, 1994).

By the late 20th century, the role of procurement and contract management in organizations had undergone a transformation. The focus shifted from merely ensuring compliance to leveraging contracts as strategic tools for achieving organizational objectives. The development of strategic procurement practices underscored the importance of managing supplier relationships and performance to drive value creation (Ellram & Carr, 1994). This period saw the introduction of key performance indicators (KPIs) and performance-based contracting as mechanisms to enhance contract performance (Spekman, 1988).

Therefore, in the early 21st century revolutionized contract performance management emerged due to technological advancements. Electronic procurement systems, contract management software, and data analytics enabled organizations to monitor and manage contracts more effectively. These technologies facilitated real-time tracking of contract performance, identification of performance issues, and implementation of corrective actions (Handfield & Nichols, 1999).

In recent years, the focus on contract performance has further evolved to encompass broader organizational goals, including sustainability and corporate social responsibility. Organizations are increasingly incorporating sustainability criteria into their contract

management practices, ensuring that suppliers adhere to environmental and social standards (Carter & Rogers, 2008). Additionally, the integration of risk management into contract performance has become more pronounced, with organizations seeking to mitigate risks through comprehensive contract terms and proactive management strategies (Van Weele & Raaij, 2014).

On the other hand, initially, procurement was primarily a transactional function focused on the acquisition of goods and services at the lowest possible cost. However, over the past few decades, the role of procurement has evolved into a strategic function critical to organizational success and efficiency (Cox, 1996).

The shift towards strategic procurement began in the 1980s and 1990s as organizations recognized the potential of procurement to contribute to competitive advantage and operational excellence. This period saw the adoption of strategic sourcing practices, supplier relationship management, and a greater emphasis on value creation rather than mere cost savings (Ellram & Carr, 1994). The integration of information technology further revolutionized procurement processes, enabling better data management, transparency, and efficiency in supplier interactions (Handfield & Nichols, 1999).

In government institutions, procurement has been particularly transformative due to the scale and complexity of public sector contracting. Effective procurement is essential to ensuring that public funds are spent efficiently and that the goods and services procured meet the required standards and are delivered on time. The introduction of public procurement regulations and frameworks, such as the World Trade Organization's Agreement on Government Procurement (GPA) and the European Union's Public Procurement Directives, has aimed to enhance transparency, competition, and fairness in public procurement processes (Arrowsmith, 2010).

However, the operational environment for procurement, especially in the public sector, has become increasingly challenging. Factors such as budget constraints, political pressures, regulatory changes, and the need for greater accountability and transparency have added complexity to procurement processes (Thai, 2001). These challenges can significantly affect contract performance, leading to issues such as delays, cost overruns, and substandard deliverables. Recognizing these challenges, this study seeks to examine effect of contract management on contract performance. Contract management, encompassing activities such as contract administration, monitoring, performance measurement, and the implementation of incentives, is crucial for ensuring that contractual obligations are met and that both parties' interests are aligned (Bendickson et al., 2016). By improving contract management practices, organizations can better mitigate risks, enhance accountability, and achieve more successful contract outcomes.

In conclusion, the evolution of procurement from a transactional to a strategic function has had profound implications for contract management. As organizations and government institutions face increasingly complex operational environments, effective contract management is essential for addressing contract performance challenges and achieving desired outcomes.

1.2.2 Theoretical background

This study was informed by assertions of the Agency Theory, which was initially advanced by Ross (1973) and later expanded upon by Jensen and Meckling (1976). The theory assumes that principals and agents possess asymmetric information regarding each other's actions, intentions, and abilities. They therefore have differing preferences, goals, and risk profiles, leading to potential conflicts of interest. For instance, agents may engage in

opportunistic behavior (moral hazard) or may be selected based on incomplete information about their capabilities (adverse selection) (Jensen & Meckling, 1976).

In this case, contract management serves as a mechanism to mitigate the agency problems inherent in principle-agent relationships. Through contractual agreements, principals seek to align the interests of agents with their own objectives and minimize the risk of opportunistic behavior or adverse outcomes (Zu & Kaynak, 2012). According to Bendickson et al. (2016), key contract management dimensions such as contract administration, monitoring, performance measurement, and incentives are designed to address information asymmetry, mitigate moral hazard, and ensure compliance with contractual obligations. Therefore, effective contract management reduces agency costs by enhancing transparency, accountability, and trust between principals and agents, thereby improving the likelihood of achieving desired contract performance outcomes.

In the context of this study, Agent Theory provided a theoretical lens to analyze how effective contract management influences the behavior of contracting parties and the outcomes of contractual agreements. Hence, by considering the assumptions and insights of Principal-Agent Theory, the study identified potential challenges, such as moral hazard or adverse selection, in contract management processes and develop recommendations to mitigate these risks and enhance overall contract performance.

1.2.3 Conceptual background

The key variables under study were contract management as the independent variable and contract performance as the dependent variable. Contract management refers to the systematic and strategically oriented process of planning, executing, controlling, and closing contracts to ensure value for money and achievement of intended outcomes (Rotich, 2014). Effective contract management ensures that obligations are fulfilled, risks are mitigated, and

the contracting parties operate in alignment with organizational goals and contract performance expectations (Eisenberg, 2020). In this study, contract management was conceptualized through three key dimensions: contract risk assessment, contract administration, and contract monitoring, each of which plays a distinct but interconnected role in driving contract performance.

Contract risk assessment involves identifying, anticipating, and evaluating potential risks financial, operational, legal, or technical that may threaten contract execution (Schindler, 2017). Early identification of risks is essential for preventing disruptions and safeguarding contract outcomes. In this study, contract risk assessment was operationalized in form of risk prioritization and contingency planning. Then, contract administration refers to the day-to-day management and coordination of contractual obligations, ensuring compliance with terms, processing variations, facilitating communication, and maintaining accurate documentation throughout the contract lifecycle (Rashid, 2019). In this study, contract administration was viewed in terms of recruitment of contract manager and development of implementation plan. Contract monitoring refers to continuous tracking of contract schedules, compliance, and the use of Key Performance Indicators (KPIs) to detect deviations early enough to allow corrective actions (Benton & McFarlane, 2019). In this study, contract monitoring was operationalized in terms of measurable KPIs and regular reporting.

On the other hand, contract performance represents the extent to which contractual obligations are satisfactorily fulfilled and desired outcomes achieved (Schwab & Nubeck, 2019; Hassan, 2023). It reflects whether the contractor and the procuring entity have adhered to contractual terms, delivered outputs on time, maintained quality standards, and controlled costs within agreed parameters (Schwab & Nubeck, 2019). Key indicators of contract

performance therefore include timeliness of completion, cost efficiency, quality of deliverables and compliance with specifications. However, in this study, contract performance was viewed in terms schedule adherence, quality of supplies, cost saving and contract compliance.

1.2.4 Contextual background

In recent years, the government of Uganda has increasingly recognized the importance of efficient and effective contract management in ensuring the successful delivery of public services and projects (Komakech, 2020). Government institutions, as key entities responsible for implementing policies and programs, engage in a myriad of contracts with external vendors, suppliers, and service providers to fulfill their mandates. A case in point, the Public Procurement and Disposal of Public Assets Act (2003) was enacted to optimize contract management within these Government institutions.

The Public Procurement and Disposal of Public Assets Act (PPDA Act) Cap. 205 (2021) has been crucial for enhancing transparency, accountability, and value for money in public procurement processes (Ahimbishibwe, 2015). It directs the procurement administration unit to assess the effectiveness and efficiency of their procedures which is very fundamental in enhancing contract performance. In order to implement remedial actions, flaws and risks must be identified. Part of the review process may be routinely reviewed through performing a formal procurement audit (Obanda, 2010)

Similarly, the PPDA Act Cap. 205 (2021) asserts that there should be effective monitor and management of supplier performance. MDAs ought to conduct periodic assessment of supplier's performance to make sure that contractual obligations are being fulfilled; randomly inspect supplied goods and/or services throughout the contract period to make

sure they meet specifications and are of a suitable standard; and be aware of any breaches of contract and be ready to take appropriate legal action (Ampumuza, 2020).

Mangeni and Sabiiti (2020) indicate that contract management foster contract performance, this study therefore sought to evaluate the contribution of contract management to NWSC in Uganda. National Water and Sewerage Corporation, which offers vital services to urban areas, is a key player in Uganda's water and sewerage sector (National Water and Sewerage Corporation, 2023). NWSC has a responsibility to make sure that these services are delivered effectively and efficiently since they are essential for Uganda's economic development, environmental sustainability, and public health (Ministry of Water and Environment Report, 2022). The corporation, however, continues to have issues with contract fulfillment, which limits its capacity to successfully carry out its mandate incidents (Mangeni M. N., 2020).

Contracts at NWSC cover a range of operational activities, including the creation and upkeep of infrastructure, the purchase of goods and services, and collaborations with outside suppliers. It is therefore essential that suppliers and NWSC honor their contractual obligations; however, this has been the case at National Water and Sewerage Corporation. There have been growing cases of cost overruns in infrastructure projects and maintenance contracts, leading to budget constraints (Okaka, 2019).

Not only that, there are growing cases of water supply interruptions, sewerage system failures, and water contamination incidents and yet clear contracts exist between NWSC and contractors. It is therefore unclear whether contract risk assessment, contract administration, and contract monitoring could have a significant influence on contract performance. This study therefore sought to examine the effect of contract risk assessment, contract administration, contract monitoring on contract performance.

1.3 Problem statement

National Water and Sewerage Corporation plays a central role in providing clean water and sewerage services across Uganda, with substantial financial resources invested in contracted water management services (Mukwaya, 2018). Regardless of such investments, the corporation has been facing a recurring contract performance challenge. According to reports by the Ministry of Water and Environment (2022) and Office of the Auditor General, (2023), some of the major projects like the Kampala Water Lake Victoria WATSAN Project have experienced significant delays where about 25% of the infrastructure projects have a delay of over 12 months which has cost the government a lot because of extension of time (EOTs). Further, a quality of supply has been raised as an issue, in which low quality of materials ordained by the contractors has increased the cost of operation and reduced the pace of project execution (New Vision, 2023). There are also financial inefficiencies, and as reported by the (PPDA, 2022) overruns in the budget by up to 15% in various NWSC projects are attributed to contract variations.

Despite the visible symptoms of stalled project progress, escalating costs, and substandard outputs, emerging evidence strongly suggests that the root cause of NWSC's poor contract performance lies in weaknesses across core contract management functions specifically risk assessment, contract administration, and monitoring (Office of the Auditor General (2023). Findings by Mangeni (2020) indicated that NWSC routinely enters into high-value contracts without sufficiently analyzing supplier risks, resulting in frequent delays and uncontrollable contract variations. Additional sector assessments by the Ministry of Finance and the Infrastructure Scorecard (2022) revealed that many NWSC contractors operate with limited supervision, inconsistent reporting, and poorly documented change orders which is a sign of weak contract management. Likewise, the Inspectorate of Government (2023) highlights chronic monitoring lapses, noting that site inspections are often irregular and that deviations

in material quality go unaddressed until failures become costly. Collectively, these weaknesses in contract management have directly contributed to the recurring project delays, the procurement of low-quality supplies, and persistent budget overruns (Office of the Auditor General, 2023). Therefore, poor contract performance at NWSC cannot be viewed in isolation; it is tied to the contract management practices used. This study therefore sought to empirically examine how these specific dimensions of contract management (contract risk assessment, administration, and monitoring) affect contract performance within the National Water and Sewerage Corporation.

1.4 The purpose of the study

The overall purpose of the study was to examine the effect of contract management on contract performance at National Water and Sewerage Corporation.

1.5 Study objectives

- i. To examine the effect of contract risk assessment on contract performance at National Water and Sewerage Corporation.
- ii. To establish the influence of contract administration on contract performance at National Water and Sewerage Corporation.
- iii. To assess the effect of contract monitoring on contract performance at National Water and Sewerage Corporation.

1.6 Study hypotheses

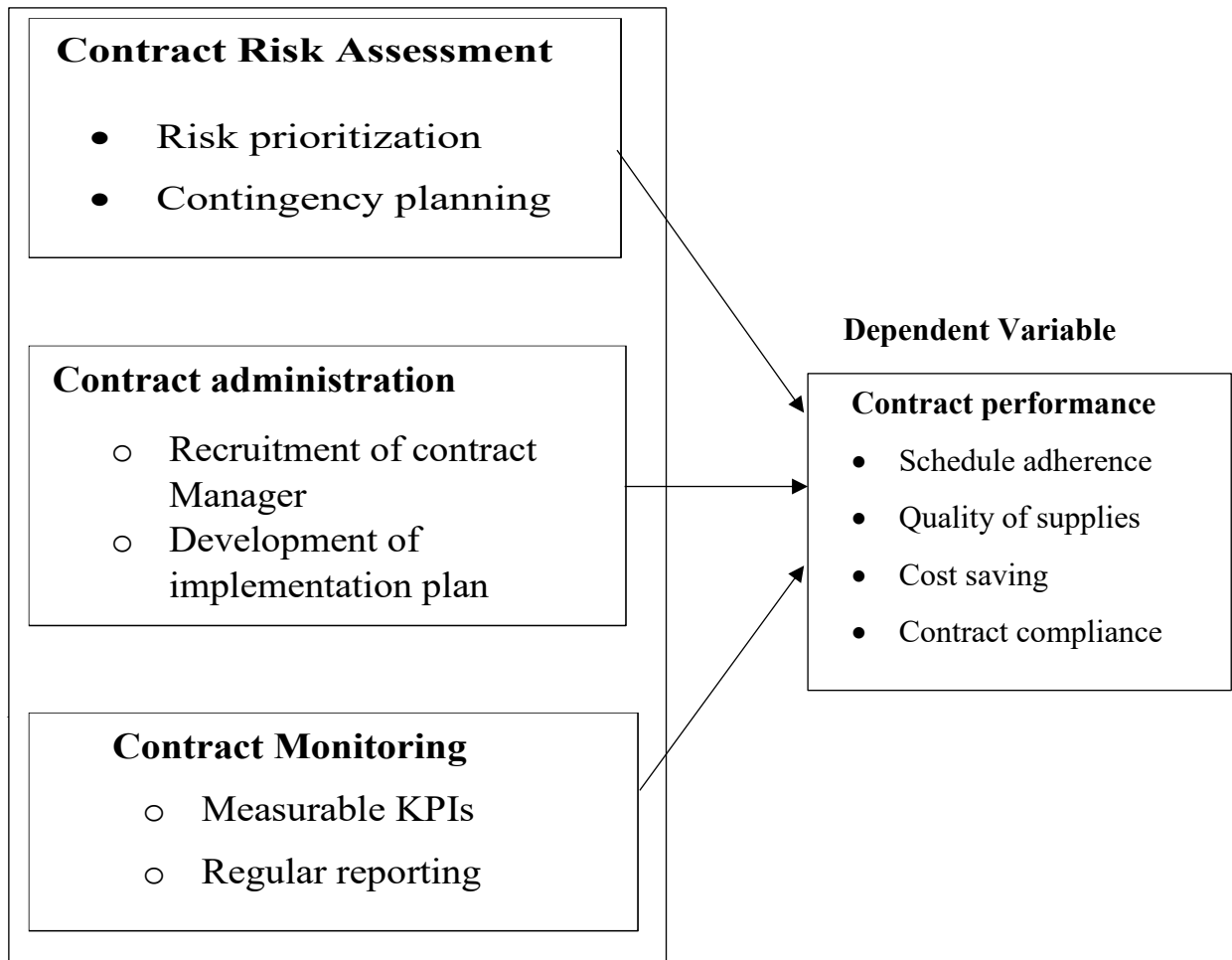
- H₁: There is a significant effect of contract risk assessment on contract performance at National Water and Sewerage Corporation?
- H₂: Contract administration has a significant influence on contract performance at National Water and Sewerage Corporation?

H₃: There is a significant effect of contract monitoring on contract performance at National Water and Sewerage Corporation?

1.7 Conceptual framework

The conceptual framework describes the set of ideas, presumptions, expectations, and theories that underpin and guide the research (Miles, Huberman & Saldana, 2014). The conceptual framework below provides a structured overview of how contract management may affect contract performance and depicts the perceived relationship that exists between contract management and contract performance.

Independent Variables (Contract Management)



Adapted from Komakech (2020) and modified by the Researcher (2024)

Figure 1.1: The conceptual framework

According to the framework, there is hypothesized relationship that exists between contract management and contract performance. It assumes that a contract management which is an independent variable predicts the changes in contract performance. Contract management constructs selected for testing in this study included Contract risk assessment, contract administration and contract monitoring. On the other hand, the dependent variable of the study was contract performance. This was measured by schedule adherence, quality of supplies, cost saving and contract compliance.

1.8 Scope of the study

1.8.1 Content scope

The overall purpose of the study was to examine the effect of contract management on contract performance at National Water and Sewerage Corporation. Therefore, the content scope focused on contract management as an independent variable, which was conceptualized as contract risk assessment, contract administration and contract monitoring. On the other hand, contract performance as a dependent variable which was measured in terms schedule adherence, quality of supplies, cost saving and contract compliance.

1.8.2 Time scope

The research was centered on reports and literature between 2017-2024 that have seen recent developments in contract management in MDAs in Uganda including NWSC. However, in the same periods, there has been a growing number of complaints on service delivery of NWSC (Private Sector Foundation of Uganda Report 2017). This study took 11 months starting from June 2024 to May 2025. This was long enough to facilitate the research process and documentation of the study findings.

1.8.3 Geographical scope

The study was conducted in National Water and Sewerage Corporation of Uganda which is designated agency responsible for offering vital services to both urban and rural areas, is a key player in Uganda's water and sewerage sector (NEMA Report, 2018). NWSC has a responsibility to make sure that these services are delivered effectively and efficiently since they are essential for Uganda's economic development, environmental sustainability, and public health (Ministry of Water and Environment Report, 2022).

1.9 Significance of the Study

To management of NWSC; This study findings can be relied on by NWSC to optimize its contract performance and, consequently, enhance its capacity to provide reliable and sustainable water and sewage services to its stakeholders.

To policy makers; The study offers insightful information that can guide policy making and enforcement of best practices for contract management in government institutions, ultimately boosting contract performance, service quality, financial sustainability, and compliance

To researchers; This study builds on the existing body of knowledge regarding contract management and contract performance. Future studies can therefore leverage on the information provided by this study to inform their studies especially in the context of Uganda.

1.11 Definition of key terms

Contract Risk Assessment; Schindler (2017) defines contract risk assessment as the systematic process of locating, examining, and evaluating any risks and uncertainties connected to a contractual agreement. It seeks to comprehend the likelihood of each risk and how it might affect the goals, participants, and results of the contract.

Contract administration; According to Komakech (2020), this refers to the process of overseeing a contract from the beginning to the end to make sure all parties carry out their end of the bargain and get the results they want. It entails a range of duties and obligations with the goals of supervising the contract's implementation, addressing any problems that may come up, and guaranteeing adherence to the terms and conditions of the agreement. The success or failure of a contract is largely determined by its administration, which also has a direct effect on contract performance.

Contract Monitoring; According to Eisenberg (2020), contract monitoring is the process of routinely examining, assessing, and making sure that each party to a contract is carrying out their responsibilities and that the terms and conditions of the contract are being adhered. It entails conducting routine evaluations of performance and compliance as well as identifying problems or departures from the agreed-upon terms

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter covers the relevant literature on the previous empirical studies written on contract management and contract performance. The chapter presents literature following the specific objectives. In the literature, the study gap is highlighted and the sources for this literature include; textbooks, journals articles, magazines, newspapers, and reports.

2.2 Theoretical review

This study anchored on the assertions of the Agency Theory, which was initially advanced by Ross (1973) and later expanded upon Jensen and Meckling (1976). The theory assumes that principals and agents possess asymmetric information regarding each other's actions, intentions, and abilities. They therefore have differing preferences, goals, and risk profiles, leading to potential conflicts of interest. For instance, agents may engage in opportunistic behavior (moral hazard) or may be selected based on incomplete information about their capabilities (adverse selection) (Jensen &Meckling, 1976).

In this case, where NWSC as the principal (contract awarding entity) and contractors as agents (executing contractual obligations), contract management may mitigate the agency problems inherent in principle-agent relationships. Through contractual agreements, principals seek to align the interests of agents with their own objectives and minimize the risk of opportunistic behavior or adverse outcomes (Zu & Kaynak, 2012). According to Bendickson, et al. (2016) the key contract management dimensions such as contract administration, monitoring, performance measurement and incentives are designed to address information asymmetry, mitigate moral hazard, and ensure compliance with contractual obligations. Therefore, effective contract management reduces agency costs by

enhancing transparency, accountability, and trust between principals and agents, thereby improving the likelihood of achieving desired contract performance outcomes.

In the context of this study on the effect between contract management and contract performance, Agency Theory provided a theoretical lens to analyze how effective contract management influences the behavior of contracting parties and the outcomes of contractual agreements. Hence, by considering the assumptions and insights of Agency Theory, the study identified potential challenges, such as moral hazard or adverse selection, in contract management processes and develop recommendations to mitigate these risks and enhance overall contract performance.

2.3 Conceptual review

2.3.1 Contract management practices

Generally, numerous studies have investigated contract management and contract performance within government contexts. Contract management refers to the systematic process of managing contract creation, execution, and analysis to maximize operational and financial performance while minimizing risks (Ahmed Jele Hassan, 2023). According to Mukwaya (2018) contract management ensures that all parties involved fulfill their contractual obligations, promoting efficiency, compliance, and accountability. Jones (2018) reveal that effective contract management is particularly crucial in public sector entities, where large-scale contracts for infrastructure development, maintenance, and service delivery must be executed efficiently to meet public service goals. Similarly, Smith et al. (2018) conducted a comprehensive review of contract management in the public sector. The study stresses the importance of governance structures, stakeholder engagement, and performance measurement in achieving successful contract outcomes. Jones & Hill (2019) examined the effect of contract management on service delivery within Government

Ministries, emphasizing the role of leadership, capacity-building, and technology adoption in driving improved performance. This study reviews literature regarding the contribution of contract administration, contract risk assessment and contract monitoring on contract performance of government institutions.

Various dimensions of contract management have been explored in literature (Kumar & Nambisan, 2019), each addressing different aspects of contract execution. These include: contract risk assessment which involves identifying and mitigating risks associated with contract execution (Liu, 2020), contract administration which focuses on managing contract terms, deliverables, and stakeholder communication (Rashid, 2019), contract monitoring concerned with tracking contract performance to ensure compliance and timely completion (Wang, 2019), contract negotiation involving establishing favourable terms before contract execution (Smith, 2020), contract closure and evaluation which involves reviewing contract performance post-completion (Wang, 2016) and contract compliance management that ensures adherence to legal and regulatory requirements (Eisenberg, 2020).

While contract management encompasses multiple dimensions, only contract risk assessment, contract administration, and contract monitoring are particularly relevant for this study at NWSC. This is because NWSC deals with large infrastructure projects, procurement, and service contracts, which come with financial, operational, and compliance risks. Therefore, understanding contract risk assessment is necessary to identify potential challenges such as contractor failure, financial mismanagement, and regulatory non-compliance. Furthermore, NWSC engages multiple contractors for water supply projects, pipeline construction, and service maintenance, thus, effective contract administration ensures that all parties understand their responsibilities, payment schedules, and performance expectations. Lastly, given that NWSC operates under strict public

accountability standards, continuous monitoring is necessary to ensure that contractors adhere to timelines, budget constraints, and quality standards. Monitoring mechanisms such as periodic performance evaluations, inspections, and progress reporting help in identifying and addressing inefficiencies in contract execution.

2.3.2 Contract performance

Contract performance is the degree in which the contracting parties are performing well and attaining results as promised, producing outputs according to outlined specifications, and attaining desired results in a contract (Ahmed Jele Hassan, 2023). Researchers highlight the fact that performance depends on the specificity of the terms of contracts and the quality of planning and the ability of buyers and suppliers to fulfill their roles (Hassan, 2023; Mukwaya, 2018). An effective contract is a governance system that minimizes uncertainty, increases accountability and offers standards on which monitoring and evaluation can be measured. The performance in the context of the public sector is not only quantified by the efficiency and timely delivery but also by compliance with the regulatory frameworks and value-for-money principles (Jones, 2018). In this way, the development of the concept of contract performance should be viewed through the prism of the technical and relational aspects of contracting as long as trust, communication, and risk allocation strategies influence the quality of the contractual outcomes.

Moreover, good contract performance can be facilitated by a strong contract management practice such as constant monitoring, periodic reporting, and responsive decision-making (Ameyaw & Chan, 2015). Contract managers are essential in compliance, risk reduction and conflict management prior to its development into performance failures. Another aspect of performance identified in literature is that contracts that are designed using a set of clear performance indicators, incentive schemes, and contractor/client interaction management

mechanisms improve performance (Thai, 2017). Within a setting like government procurement, institutional capacity, organizational culture and legal frameworks play a great role in determining the effectiveness of contracts. Altogether, the theoretical insight into the contract performance highlights its multidimensional character, as it is united by the managerial, relational, and institutional issues that all contribute to the success of the contractual relations.

2.4 Empirical Review

The section was written following the of study objectives.

2.4.1 Contract risk assessment and contract performance

Contract risk assessment plays a crucial role in ensuring the successful execution of contracts within organizations. It involves identifying, analyzing, and mitigating potential risks associated with contractual agreements to minimize negative effects on contract performance. This empirical review examines existing research literature to explore the relationship between contract risk assessment and contract performance in organizations.

Jones et al. (2019) investigated the influence of comprehensive risk assessment practices on contract performance in the construction industry. The study found a significant positive correlation between thorough risk identification, analysis, and mitigation strategies and improved project outcomes, including adherence to timelines, budget compliance, and stakeholder satisfaction.

Similarly, a study by Smith and Johnson (2018) in the context of government contracts highlighted the importance of systematic risk assessment processes in achieving favorable contract performance metrics. Organizations that conducted comprehensive risk assessments experienced fewer project delays, cost overruns, and legal disputes, leading to enhanced overall performance outcomes.

Chen et al. (2020) also examined the impact of proactive risk identification on contract performance in information technology (IT) projects. They found that organizations that systematically identified and prioritized potential risks at the outset of projects were better equipped to develop contingency plans, mitigate threats, and deliver projects within scope, schedule, and budget constraints.

Furthermore, Kim and Lee (2017) explored the relationship between risk identification techniques and contract performance in supply chain contracts. They identified a positive correlation between the use of advanced risk assessment tools, such as probabilistic modeling and scenario analysis, and improved supply chain performance metrics, such as on-time delivery rates and inventory turnover.

Wang et al. (2019) investigated the effect of risk transfer mechanisms, such as insurance coverage and indemnification clauses, on contract performance in the energy sector. They found that organizations that effectively transferred and allocated risks to external parties experienced reduced financial losses and disruptions, resulting in improved contract performance.

Additionally, research by Liu and Yuan (2018) focused on the role of proactive risk management practices, such as risk-sharing agreements and collaborative risk mitigation efforts, in improving contract performance in inter-organizational partnerships. They observed that organizations that engaged in joint risk management activities with their partners achieved higher levels of performance and mutual value creation.

Some studies have examined the integration of contract risk assessment processes with performance measurement systems to enhance overall organizational performance. For instance, a study by Li et al. (2021) explored the implementation of integrated risk-performance frameworks in project-based organizations. They found that organizations that

systematically linked risk assessment results with performance metrics, such as key performance indicators (KPIs) and balanced scorecards, were better equipped to proactively manage risks, monitor performance trends, and achieve strategic objectives.

In conclusion therefore, empirical evidence suggests a strong positive relationship between contract risk assessment practices and contract performance outcomes in organizations across various industries and sectors. Comprehensive risk assessment processes, including thorough risk identification, analysis, and mitigation strategies, play a pivotal role in minimizing uncertainties, enhancing project outcomes, and ensuring the successful execution of contractual agreements. This could imply that risk assessment may have a significant relationship with contract performance leading to the hypothesis below;

Hypothesis 1: *There is a significant positive effect of contract risk assessment on contract performance at National Water and Sewerage Corporation.*

2.4.2 Contract administration and contract performance

Contract administration plays a critical role in the effective management and execution of contracts within organizations (Komakech, 2020). It encompasses various activities such as handling disputes, ensuring quality control, and managing stakeholder relationships. The effectiveness of contract administration has been widely recognized as a key determinant of contract performance, which refers to the degree to which contracts meet their intended objectives and deliver value to the parties involved. This study examines the relationship between contract administration practices and contract performance based on existing research literature.

The study by Kumar and Nambisan (2019) investigated the relationship between contract administration processes and contract performance in the construction industry. The findings revealed a significant positive correlation between effective contract administration

practices, such as timely communication, clear documentation, and proactive issue resolution, and overall contract performance outcomes.

Similarly, research conducted by Jones and Weckler (2018) in the context of government contracts highlighted the importance of contract administration in achieving desired project outcomes. They identified factors such as contract clarity, stakeholder collaboration, and contract monitoring as critical determinants of contract performance.

Furthermore, the study by Smith et al. (2020) explored the effect of communication and collaboration between contracting parties on contract performance. They found that effective communication channels, regular progress updates, and collaborative problem-solving significantly enhanced contract performance by fostering trust, reducing misunderstandings, and addressing issues promptly. Similarly, Osei-Kyei and Chan (2018) emphasized the importance of collaborative contract administration practices, such as joint planning sessions, shared risk management, and mutual goal-setting, in improving project outcomes and client satisfaction.

Several studies have highlighted the significance of monitoring and control mechanisms in ensuring compliance and mitigating risks during contract execution. For instance, a study by Wang and Chien (2017) examined the effect of performance measurement systems on contract performance in supply chain contracts. They found that rigorous performance monitoring and feedback mechanisms significantly enhanced contract compliance and performance outcomes.

Additionally, research by Chen and Li (2019) underscored the role of contract governance mechanisms, such as performance incentives, penalties, and audit procedures, in promoting accountability, transparency, and performance improvement across various contract types.

With the advent of digital technologies, research has also explored the role of contract management systems (CMS) and automation tools in streamlining contract administration processes and improving performance outcomes. For example, a study by Sun et al., (2021) investigated the adoption of CMS in healthcare contracts and its effect on contract performance. They found that organizations leveraging advanced CMS experienced higher levels of contract compliance, efficiency gains, and cost savings compared to manual processes.

In conclusion, the empirical evidence suggests a strong positive relationship between effective contract administration practices and contract performance outcomes in organizations across different industries and sectors. Clear communication, planning and effective leadership play pivotal roles in enhancing contract performance. In this case therefore, contract administration could have a significant relationship with contract performance there by leading to the hypothesis below;

Hypothesis 2: *Ccontract administration has a significant influence on contract performance at National Water and Sewerage Corporation*

2.4.3 Contract monitoring and contract performance

Contract monitoring is a critical aspect of contract management, involving the systematic tracking, evaluation, and enforcement of contractual obligations to ensure compliance and optimize performance outcomes. This empirical review examines existing research literature to explore the relationship between contract monitoring and contract performance in organizations across various industries and sectors.

Smith et al. (2019) Investigated the influence of proactive contract monitoring practices on contract performance in the healthcare sector. The study found a significant positive correlation between regular monitoring activities, such as progress reviews, performance

audits, and quality assessments, and improved contract performance metrics, including service delivery outcomes, patient satisfaction, and cost-effectiveness.

Similarly, Jones and Patel (2018) conducted a study in the context of public procurement contracts where they highlighted the importance of proactive monitoring in achieving favorable performance outcomes. Organizations that implemented robust monitoring mechanisms experienced fewer instances of contract breaches, delays, and disputes, leading to enhanced overall performance and stakeholder satisfaction.

Kim et al. (2020) Focused on the adoption of Internet of Things (IoT) sensors for real-time monitoring of construction projects. They found that organizations that leveraged IoT-enabled monitoring systems achieved greater project visibility, improved resource utilization, and faster issue resolution, resulting in enhanced project performance and client satisfaction.

Furthermore, Wang and Liu (2019) explored the use of block chain technology for contract monitoring in supply chain contracts. They observed that block chain-based monitoring platforms facilitated transparent, tamper-proof record-keeping and enhanced trust among contracting parties, leading to improved supply chain visibility, efficiency gains, and contract performance.

Eisenberg (2020) also examined the effectiveness of performance metrics and key performance indicators (KPIs) in guiding contract monitoring efforts and driving performance improvements where it is revealed that monitoring affects contract performance. Li and Zhang (2018) investigated the use of KPIs for monitoring outsourced service contracts. They found that organizations that defined clear, measurable KPIs and tracked performance against these indicators were better equipped to identify performance gaps, initiate corrective actions, and achieve contract performance targets.

Additionally, Chen et al. (2021) focused on the development of performance scorecards for monitoring inter-organizational contracts. They observed that organizations that utilized comprehensive performance scorecards, incorporating both financial and non-financial metrics, were able to assess contract performance holistically, identify areas for improvement, and drive continuous performance enhancement efforts.

Gupta and Kumar (2020) examined the effect of performance-based contracting on contract performance in service delivery contracts. They found that contracts incorporating performance incentives, such as bonuses for meeting or exceeding performance targets, incentivized contractors to proactively monitor performance and invest in quality improvement initiatives, resulting in enhanced service delivery outcomes and client satisfaction.

All in all, the empirical evidence suggests a strong positive relationship between effective contract monitoring practices and contract performance outcomes in organizations. Proactive monitoring, leveraging real-time monitoring technologies, defining clear performance metrics, and integrating monitoring with performance incentives are key strategies for optimizing contract performance and achieving desired outcomes. This therefore mean that contract monitoring may have a significant relationship with contract performance leading to the hypothesis below;

Hypothesis 3: *There is a significant positive effect of contract monitoring on contract performance at National Water and Sewerage Corporation.*

2.5 Literature Gaps

Despite the extensive empirical studies on contract management and its effect on contract performance, several research gaps remain, particularly in the context of public sector utility organizations like the National Water and Sewerage Corporation (NWSC). For instance, most existing studies on contract management practices focus on industries such as construction, healthcare, IT, and supply chain management. There is limited empirical research on how contract risk assessment, administration, and monitoring affect contract performance in public utilities like NWSC. Furthermore, prior studies have been done in developed economies, where contract enforcement mechanisms and governance structures are more advanced. There was a need for empirical research focusing on Uganda and similar developing economies to explore the effectiveness of contract risk assessment, administration, and monitoring in public sector contract performance. The studies also tend to concentrate on analyzing contract risk assessment, administration, and monitoring as independent factors, but there is limited research on their interdependence. Understanding how these elements interact could provide a more holistic approach to improving contract performance at NWSC.

2.6 Conclusion

This chapter presents conceptual review which highlights that contract management specifically contract risk assessment, contract administration, and contract monitoring are crucial determinants of contract performance. Empirical evidence from various industries suggests that contract risk assessment helps organizations proactively identify, analyze, and mitigate risks, reducing financial losses, contract disputes, and delays, contract administration ensures that contracts are well-managed through clear communication, stakeholder collaboration, and compliance with agreed-upon terms and contract monitoring enables organizations to track contract performance, enforce obligations, and ensure that

projects are completed within the specified scope, time, and budget. For NWSC, a public utility responsible for water supply and sanitation services, contract management is relevant in ensuring efficiency, service delivery, and adherence to regulatory frameworks. However, significant literature gaps exist regarding their application in public utility organizations, particularly in Uganda and other developing countries.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the approach that was used to carry out this study. It describes the research concept, study population, sample size and sampling technique, data collection methodologies, data quality control procedures, data analysis techniques, and the data collection restrictions that are anticipated.

3.2 Research Design

The study adopted a case study design, using the National Water and Sewerage Corporation (NWSC) as the context. This design was appropriate as it allowed for an in-depth exploration of contract management and implementation within NWSC. Data was collected from staff across five key departments directly involved in these processes. The case study approach was suitable because it facilitated the collection of rich, detailed insights from multiple respondents, enabling a comprehensive analysis of the subject matter at a specific point in time (Zangirolami-Raimundo, 2018).

3.3 Research Approach

This study adopted a mixed method by blending both quantitative and qualitative approaches. This helped the study to triangulate responses so as to have a comprehensive view of respondent's perceptions. Quantitative approach enabled the study to measure contract management and contract performance which made it easier to analyze and compare data objectively as supported by (Sekaran, 2003) Qualitative approach helped to uncover intricate details regarding perceived level of contract performance at NWSC which was not possible through quantitative approach.

3.4 Study Population

The study population consisted of 321 staff members from 5 selected branches located in the 5 main divisions of Central, Kawempe, Makindye, Nakawa and Rubaga. NWSC has 7 administrative units/departments, but for this study, the study population distribution was drawn from 5 departments directly involved in contract management and implementation within the organization. These departments included; procurement, legal, finance, project management, and operations (NWSC Human Resource database, 2024). These specific departments were considered for this study because they play a crucial role in the lifecycle of contracts and provided valuable insights into how contracts are managed and how they affect overall performance at NWSC. The distribution of staff per department is illustrated in Table 3.1 below.

3.5 Sample and Sample determination

The study's sample size was determined using Krejcie and Morgan (1970) table of sample determination. According to the table, in a population of 321, the sample size was 174 at a 95% confidence level. The unit of inquiry in this study was the individual staff members in the procurement, legal, finance, project management and operations departments of the five branches of the NWSC that were selected in Kampala. They were the key respondents to whom the data were gathered. The individual staff members were the unit of analysis because the conclusions and statistical analysis of the study were made on individual level responses to contract management and their effect on organizational performance. For interviews, a sample of 10 legal officers ,10 departmental heads and 5 senior management staff were interviewed.

Table 3.1: Population and sample distribution

Category	Population	Sample	Sampling Technique	Instrument
Procurement	30	28	Stratified random sampling	Questionnaire
Finance	51	21	Stratified random sampling	Questionnaire
Project management	65	30	Stratified random sampling	Questionnaire
Operations	150	70	Stratified random sampling	Questionnaire
Senior Management	5	5	Census	Interview guide
Heads of Departments	10	10	Census	Interview guide
Legal	10	10	Census	Interview Guide
Total	321	174		

Source: NWSC Human Resource database (2024)

3.6 Sampling Technique

The study employed both census and stratified random sampling techniques

3.6.1 Census sampling

A census involves collecting data from every member of the population rather than from a subset or sample (Mugende & Mugende, 2013). In other words, a census attempts to include every individual or element in the entire targeted category under study. This technique was employed on legal officers, departmental heads and senior management staff and all of them were considered in this study.

3.6.2 Stratified Random Sampling

The study employed stratified random sampling to ensure adequate representation from each department. This technique involved dividing the population into homogeneous subgroups (departments) and then conducting random sampling within each stratum. Stratified random sampling was appropriate as it enhances the precision of estimates by reducing sampling variability and ensuring that all key subgroups are represented in the study (Creswell & Creswell, 2018).

3.7 Sources of data

This study gathered primary data and secondary data. Primary data sources are the original materials on which research is based. They provided first-hand accounts or concrete proof of the subject at hand (Leedy & Ormrod, 2015).

3.8 Data Collection methods

The study applied several data collection methods which complemented each other. The major methods included interviews and survey methods.

3.8.1 Interviews

To gather qualitative data, the study employed the interview method. This approach was applied to senior management to complement the survey method and provide valuable qualitative insights into contract management and contract performance at NWSC. Interviews with departmental heads and senior management staff facilitated a more in-depth and personalized exploration of perceptions regarding contract management and its contribution to contract performance. Interviews are a widely recognized qualitative research technique that allows for deeper understanding, clarification of complex issues, and the exploration of participants' experiences and perspectives (Kvale & Brinkmann, 2015).

3.8.2 Questionnaires

To gather quantitative data, survey questionnaires was used. Under this method, a structured questionnaire was developed. Conducting a survey allowed for efficient data collection from a large number of respondents within a relatively short period. With electronic administration through email and NWSC online platforms, the survey reached a wide audience of staff, maximizing participation and response rates. Similarly, the survey method ensured consistency in data collection, as all respondents were presented with the same set of questions in a standardized format. This minimized variability in responses and facilitates

comparative analysis across different demographic groups and time periods (Creswell, 2014).

3.9 Data collection instruments

Questionnaires and interview guide were the main instruments for data collection to simplify data collection (Cooper & Schindler, 2003).

3.9.1 Interview Guide

An interview guide was designed to support in-depth conversations with senior management personnel of NWSC. This guide provided organized questions and suggestions to explore different facets of contract management practices. It guaranteed consistency and thoroughness in data collecting while permitting freedom to investigate emergent topics by offering a structure for the interview process. They enabled the researcher to successfully navigate complicated subjects and obtain insightful information from departmental heads (Patton, 2002).

3.9.2 Questionnaire

The study incorporated self-administered questionnaires containing closed-ended questions as a complementary data collection method. This was expected to enhance the study by capturing quantitative insights from staff members of NWSC. The questionnaire enabled for systematic data gathering across a larger sample size, providing valuable statistical data to complement the qualitative findings obtained from focus group discussions and interviews as supported by Mugenda and Mugenda (2005).

3.10 Quality Control

The study tested instruments for validity and reliability before they were used for data collection.

3.10.1 Validity

Validity refers to the extent to which research results can be accurately interpreted and generalized (Amin, 2005). To ensure validity, data collection instruments were prepared and reviewed by supervisors and other experts who checked for the correctness. The supervisors' comments were then integrated to improve on the quality of the instruments. Content Validity Index was also computed to validate the accuracy of the instrument. It was computed using the formula:

$$CVI = \frac{\text{Questions/items rated valid in the questionnaire}}{\text{Total Number of Questions/items}} = \frac{26}{33} = 0.79$$

From the above, the overall Content Validity Index (CVI) is 0.79, which exceeds the threshold of 0.7, implying that the instrument was valid for data collection. This is in line with the recommendations of Polit and Beck (2006), who suggest that a CVI above 0.7 indicates acceptable content validity of an instrument. Specifically, focusing on individual variable, Table 3.2 below shows the CVI results.

Table 3.2: Validity tests

Variables	CVI per variable
Contract Risk Assessment	0.75
Contract Administration	0.75
Contract Monitoring	0.78
Contract Performance	0.78

The Table 3.2 shows that Content Validity Index for each variable was above 0.7 which suggests that the instrument was valid as supported by Hair et al. (2010).

In addition, the questionnaires were pretested prior to data collection and this was done by administering questionnaires to 32 respondents within the target population but outside the sample. This helped to identify the gaps and make modifications accordingly. All in all, the researcher ensured that instruments were relevant in order to have meaningful and reliable results as supported by (Mugenda & Mugenda 2005).

3.10.2 Reliability

Reliability is defined as the level of consistency that a research instrument produces after repeated use. To ensure reliability, Cronbach's Alpha was computed using the pre-test results as suggested by Amin (2005). The variables that met the threshold of an alpha of 0.7 or above were treated reliable as suggested by Sekaran (2003) who asserts that, the closer the alpha to 1, the stronger the reliability. The reliability results from the pretested data are shown in Table 3.3 below.

Table 3. 3: Reliability statistics

Variables	Cronbach's Alpha	N of Items
Contract Risk Assessment	.845	6
Contract Administration	.794	6
Contract Monitoring	.878	7
Contract Performance	.860	7

The table provides Cronbach's Alpha values for different variables, indicating the reliability of the scales used to measure each variable. From the results, it is observed that all variables have Cronbach's Alpha values above 0.7, satisfying the threshold for reliability. This suggests that the items for each variable are consistent in measuring their respective constructs, making the instrument reliable for further analysis.

Lastly, factor analysis was conducted to test the internal consistency of the measurement items for each variable. Items with factor loadings below 0.5 were either refined or omitted, as recommended by Hair et al. (2010). Factor analysis is commonly used to ensure that items within a scale measure the same underlying construct and to improve the reliability of the instrument by retaining only those items that contribute meaningfully to the construct. The results from the analysis are shown in Appendix 3. The factor analysis results provide insights into the validity and reliability of the variables tested. A factor loading (correlation

between item and factor) ≥ 0.5 indicated that an item is strongly associated with the underlying factor. All items had loadings between 0.654 and 0.809, exceeding the 0.5 threshold. This indicates that the items strongly measure the underlying construct of contract risk assessment, Contract Administration, Contract Monitoring, and Contract Performance.

3.11 Variables and Measurements

The study adopted items of measurement for variables from the previous studies and modify them to suit the current study. Both nominal and ordinal scales were used to measure the variables. For instance, in the case of sample characteristics such as employees' gender, age, level of education, and experience, a nominal scale was used.

The independent variable which in this case was contract management was conceptualized in three dimensions; contract administration, contract risk assessment and contract monitoring.

The dependent variable which was contract performance was measured in terms of cost saving, contract compliance, quality of supplies and schedule adherence.

Both the dependent and independent variables were measured using a five-point Likert scale, which categorized and ranked responses based on "strongly agree," "agree," "not sure," "disagree," and "strongly disagree." This scale was adopted because it allows for the quantification of subjective perceptions and attitudes while maintaining an ordinal structure suitable for statistical analysis (Mugenda & Mugenda, 1999; Amin, 2005). Likert scales are widely used in social science research as they facilitate the measurement of varying degrees of agreement or disagreement, enhancing the reliability and validity of data collection (Likert, 1932).

3.12. Data Analysis

The study used both qualitative and quantitative approaches for analysis.

Under quantitative approach, the study utilized statistical software (SPSS) Ver. 23. The study conducted Pearson's correlation coefficient to explain the level of association of variables on a scale (-1 r 1). This was because according to Sedgwick (2012), it was ideal for the studies where the research objectives were to understand the exact linear relationship between variables. Hierarchical Regression analyses was used to test the study hypothesis of which the hypothesis was supported if the p-value is less than 0.05. The level of significance will be at 5%.

The study performed thematic analysis on interview transcripts to extract key themes and patterns as supported by (Sarantakos, 2005). All findings from the quantitative analysis had a sub-theme. The opinions, viewpoints, and comments of respondents were explicitly interpreted and presented in themes.

3.13 Ethical considerations

Given that the study was conducted at NWSC, there were challenges regarding confidentiality. Staff were concerned about the disclosure of sensitive information, Similarly, staff felt pressured to participate in the study and hesitant to provide critical feedback or express dissenting views, fearing retribution or negative consequence.

In this case, the following strategies were applied by the researcher to address the ethical dilemmas; the study guaranteed adherence to the rules of ethics in research. For instance, the researcher first obtained the letter of introduction from the Directorate of Research of Kyambogo University. This letter of introduction was used to seek for approval from the Management of NWSC. In addition, before the study, the researcher sought participants' consent to participate in the study. Furthermore, the study obtained informed consent from

participants, ensuring they understood the purpose, risks, and benefits of the study. They were assured of the confidentiality of their responses.

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter presents the analysis, interpretation, and discussion of the data collected during research. It is organized to address the study objectives and research questions, providing a systematic examination of the findings. The chapter begins with a brief description of the demographic characteristics of the respondents, followed by detailed analyses aligned with the study variables.

4.2 Response Rate

The response rate was calculated as a percentage of questionnaires that were fully completed and returned out of the total number distributed. In this case, 169 questionnaires were distributed as per the study sample, and 148 were returned fully completed. This constituted a response rate of approximately 87.6% which indicates a high level of participation among the targeted respondents. According to Nunally (1970), a response rate above 70% is generally considered acceptable in social science research, as it reduces the likelihood of significant non-response bias.

4.3 Sample characteristics

The study gathered data regarding sample characteristics in order to draw an understanding on the profile of the respondents who participated in the study. This was essential in specifically understanding the demographic, educational, and professional background of the respondents, which may influence their perspectives and responses. The study therefore examined the sample characteristics which included gender, age, education level, years of experience, and the types of contracts handled.

Table 4.1: Sample characteristics

Gender of respondents	Frequency	Percent
Male	105	70.9
Female	43	29.1
Total	148	100.0
Age of the respondent	Frequency	Percent
18-30 years	14	9.5
31-40 years	67	45.3
41-50 years	52	35.1
51-60 years	15	10.1
Total	148	100.0
Level of education	Frequency	Percent
Certificate	11	7.4
Diploma	35	23.6
Bachelor	81	54.7
Masters	21	14.2
Total	148	100.0
Years of Experience in Contract Management	Frequency	Percent
0-5 years	44	29.7
6-10 years	74	50.0
11-15 years	28	18.9
16+ years	2	1.4
Total	148	100.0
Types of contracts primarily handled	Frequency	Percent
Goods	52	35.1
Services	61	41.2
Works	15	10.1
Consultancies	20	13.5
Total	148	100.0

Source: Primary data (2024)

Table 4.1 above presents descriptive statistics on the demographics and professional characteristics of the respondents. Regarding the gender of respondents, results show that majority of the respondents were male (70.9%), while females accounted for 29.1%. This indicates a significant gender disparity among the respondents, which might reflect the broader gender composition in the field under study.

In regards to the age bracket of respondents, results revealed that age group of 31-40 years had the highest representation, comprising 45.3% of the respondents. The age groups followed this between 41-50 years (35.1%) and 51-60 years (10.1%) also had considerable representation. Only 9.5% of the respondents were between 18-30 years, indicating that most of the participants are in mid-career or later stages of their professional lives.

In line with the Level of Education, it was established that majority of respondents held a Bachelor's degree (54.7%), followed by Diploma holders (23.6%), Master's degree holders (14.2%), and those with a Certificate (7.4%). This suggests that the majority of respondents are well-educated, which could positively influence their ability to handle contract management tasks effectively.

In terms of years of experience in Contract Management, results show that half of the respondents (50.0%) reported having 6-10 years of experience in contract management, while 29.7% had 0-5 years of experience. A smaller proportion, 18.9%, had 11-15 years of experience, and only 1.4% had more than 16 years. This distribution indicates a predominance of mid-level professionals with practical experience in contract management.

Lastly, regarding the types of contracts primarily handled the respondent's department, majority of respondents handled Services contracts (41.2%), followed by Goods contracts (35.1%) and Fewer respondents dealt with Consultancies (13.5%) and Works contracts (10.1%). These findings reflect the primary areas of contract management focus among the respondents.

4.4 Descriptive statistics

4.4.1 Descriptive statistics on contract risk assessment

The study run descriptive statistics to provide valuable insights into perception of risk prioritization and contingency planning as tools for contract risk assessment for improving

contract performance at NWSC. The findings are based on the mean scores and standard deviations of various items adopted for measurement.

Table 4.2: Descriptive statistics on contract risk assessment

Items	Mean	Std. Dev
Risks are regularly reviewed and mitigation measures updated to reflect the changes.	4.08	1.040
High-priority risks are allocated appropriate resources and immediately addressed	3.91	.978
Our organization involves key stakeholders in the risk management process.	3.88	1.124
Our organization has a detailed contingency plan for high-priority risks.	3.72	1.154
The organization does risk prioritization based on the impact analysis	3.51	1.122
The organization carries out risk assessment for all contracts	3.45	1.174
Grand Mean	3.76	1.099

Source: Primary Data (2024)

The results in Table 4.2 above provide insights into respondents' perceptions of contract risk assessment practices within NWSC, using a Likert scale (e.g., 1 = Strongly Disagree to 5 = Strongly Agree). When asked, respondents indicated that risks are regularly reviewed and mitigation measures updated at NWSC (Mean = 4.08). This suggests that most respondents agree that the organization actively reviews risks and updates mitigation measures as needed. Not only that, respondents also revealed that high-priority risks are allocated appropriate resources (Mean = 3.91). This shows that respondents generally agree that the organization prioritizes high-risk areas and allocates resources accordingly. Similarly, the organization's stakeholder engagement in risk management was perceived positively, with respondents revealing that key stakeholders are involved in the contract risk assessment process (Mean = 3.88). Furthermore, the results also show that detailed contingency plans for high-priority risks are always developed (Mean = 3.72) which indicates moderate agreement. In the same way, the Mean = 3.51 indicates some level of agreement that risk

prioritization at NWSC is based on impact analysis. Lastly, results show that risk assessment for all contracts (Mean = 3.45) is perceived to be weak.

From interviews with senior management at NWSC, a recurring theme emerged regarding the organization's commitment to proactive and inclusive risk management practices. Senior managers consistently emphasized that risk identification and review processes are embedded in the organization's strategic operations, ensuring that risks are regularly monitored and mitigation strategies are updated to address emerging challenges.

The interviews further highlighted those resources are strategically allocated to address high-priority risks. Managers pointed out that;

“...dedicated teams are deployed to oversee critical risk areas. However, they acknowledged that resource constraints sometimes limit the ability to comprehensively manage lower-priority risks, indicating a potential gap that could be explored further”.

Senior managers stressed that engagement with both internal and external stakeholders is integral to the risk management process, fostering transparency and shared accountability.

4.4.2 Descriptive statistics on contract administration

The study run descriptive statistics to provide valuable insights into perception of recruitment of contract managers and development of implementation plan as tools for contract administration for improving contract performance at NWSC. The findings are based on the mean scores and standard deviations of various items adopted for measurement.

Table 4.3: Descriptive statistics on contract administration

Items	Mean	Std. Dev
Our organization provides adequate training and orientation for contract managers.	3.78	1.136
Our organization has a standardized process for developing contract implementation plans.	3.77	1.229
Contract implementation plans are developed with input from the key stakeholders	3.76	1.090
The roles of contract managers are strictly communicated upon appointment	3.75	1.130
Our organization has a specific criteria of appointing contract managers	3.51	1.059
The contract managers are appointed according to experience and relevant skills	3.26	1.224
Grand Mean	3.64	1.145

Source: Primary data (2024)

From the results, generally the overall grand mean of 3.64 reflects moderate agreement across items, indicating that the organization has a reasonable foundation for contract administration but faces challenges with consistency in processes, stakeholder engagement, and clarity in criteria for appointing managers. Specifically, in regards to whether, organization provides adequate training and orientation for contract managers, majority of the respondents agreed with Mean of 3.78 and Std. Dev of 1.136.

Similarly, in regards to whether the organization has a standardized process for developing contract implementation plans, there was a moderate agreement (Mean= 3.77, Std. Dev =1.229). This implies standardizing and enforcing the implementation planning process across all departments can improve consistency and reduce inefficiencies. In addition, respondents showed a moderate agreement on whether stakeholder engagement is a valued aspect of contract planning with a mean of 3.76 and Std. Dev of 1.090. This implies that increasing efforts to consistently involve key stakeholders in planning can improve the quality and acceptance of implementation plans.

In the same way, respondents agree that contract manager roles are clearly communicated with mean of 3.75 and Std. Dev of 1.130 which means that the organization should develop formal communication protocols to ensure clarity of roles and expectations for all appointed contract managers. Similarly, there was agreement that the organization has a specific criterion for appointing contract managers (Mean: 3.51 and Std. Dev: 1.059). This means that the organization should establish and communicate clear, objective criteria for appointing contract managers to enhance transparency and fairness in recruitment.

Lastly, the lowest mean score of 3.26 and Std. Dev of 1.224 indicates that respondents are unsure or neutral about whether experience and skills are consistently prioritized during appointments. This means that a skills-based recruitment policy should be formalized and consistently applied to ensure competent contract managers are appointed, enhancing contract performance.

To complement the descriptive statistics presented, anecdotal evidence was gathered from interviews with procurement officers, contract managers, and other relevant stakeholders within the organization. For instance, from narrative of contract managers, the notes that;

“.... before we were assigned contracts, we had a full week of training organized by the procurement unit. It covered everything from procurement laws to contract lifecycle management. That gave us the confidence we needed to hit the ground running. We follow a clear template provided by the contracts committee that outlines deliverables, timelines, and monitoring tools. It is part of the checklist before a contract can be activated.” Contract Management

4.4.3 Descriptive statistics on contract monitoring

The study run descriptive statistics to provide valuable insights into the effectiveness and perception of Key Performance Indicators (KPIs) as tools for monitoring and improving

contract performance at NWSC. The findings are based on the mean scores and standard deviations of various KPI-related practices

Table 4.4: Descriptive statistics on contract monitoring

Items	Mean	Std. Dev
The performance against KPIs is communicated to all relevant parties in a timely manner.	4.19	1.019
KPIs are aligned with the overall strategic goals of our organization.	4.14	1.176
Regular reporting helps in maintaining accountability and transparency in contract management.	4.07	.826
KPIs are regularly reviewed and updated to ensure they remain relevant.	4.05	1.055
The KPIs are easily understood by all stakeholders involved in the contract.	4.05	1.191
Our organization establishes clear and measurable Key Performance Indicators (KPIs) for each contract.	4.00	1.088
The KPIs used in our contracts accurately reflect the key objectives and deliverables.	3.87	1.174
Grand Mean	4.05	1.076

Source: Primary data (2024)

Based on the results in Table 4.4 above, it is observed that respondents strongly agree that KPI performance is communicated effectively and promptly (Mean: 4.19 and Std. Dev: 1.019). This means that communication of KPI performance promotes accountability and informed decision-making. When asked whether KPIs at NWSC are aligned with the overall strategic goals, there was a high agreement (Mean: 4.14 and Std. Dev: 1.176) meaning that, strengthening strategic alignment through regular reviews and updates of KPIs can further enhance their relevance and effectiveness in driving organizational objectives.

Similarly, in regards to whether regular reporting helps in maintaining accountability and transparency in contract management, respondents strongly agreed meaning that maintaining rigorous reporting practices will reinforce transparency and trust among stakeholders, contributing to improved contract performance.

Furthermore, respondents agree that the organization regularly reviews and updates KPIs, although moderate variability suggests inconsistency in implementation (Mean: 4.05 and Std. Dev: 1.055). This means that a standardized process for KPI review across departments can ensure relevance and uniformity. In the same way, respondents agreed that KPIs are easily understood by all stakeholders involved in the contract (Mean: 4.05 and Std. Dev: 1.191). This means that clarifying KPI documentation and communication can enhance comprehension and collaboration among stakeholders.

In addition, respondents agree that clear and measurable KPIs are established, (mean: 4.00 | Std. Dev: 1.088) implying that refining the process for KPI development to ensure consistency across all contracts will further strengthen contract administration. Lastly, there was a moderate agreement that while KPIs generally align with objectives, there may be gaps in accurately reflecting deliverables (Mean: 3.87 and Std. Dev: 1.174). This implies that enhancing stakeholder input during KPI formulation can ensure objectives and deliverables are fully captured.

To complement the descriptive statistics presented, anecdotal evidence was gathered from interviews with procurement officers. For instance, from narrative of senior procurement officer, he noted that;

“...once the contract performance report is compiled, it is circulated to all stakeholders within a week. Everyone from finance to operations is kept in the loop. We do not just pick KPIs randomly. They must tie back to our departmental work plans and the larger strategic framework. This helps measure what truly matters. The quarterly performance reviews based on KPIs help us flag issues early. It is what keeps contractors on track and gives us a documented trail of accountability. We had to revise our KPIs midway through a major infrastructure project because the scope changed. That flexibility ensures the metrics stay useful” **Senior Procurement Officer**

4.4.4 Descriptive statistics on contract performance

The study run descriptive statistics to provide valuable insights into perception of contract performance at NWSC. The findings are based on the mean scores and standard deviations of various items adopted for measurement.

Table 4.5: Descriptive statistics on contract performance

Items	Mean	Std. Dev
The project milestones are achieved according to the schedule	4.09	.940
The contractor has been transparent about any additional costs incurred	3.82	1.004
There are always contract variations causing delays	3.78	1.007
The contract tasks are completed within the agreed-upon timeframes.	3.78	1.066
Any quality issues have been promptly addressed by the contractor in accordance with the contract terms and conditions	3.62	1.214
Time extensions are always justified and approved when necessary	3.50	1.134
The contractors always deliver work with minimal variations	3.34	1.080
Grand Mean	3.70	1.064

Source: Primary data (2024)

From the descriptive results on Table 4.5 above, it is observed that respondents agree that the project milestones are achieved according to the schedule with a mean score of 4.09 and Std. Dev of 0.940. This means that the organization can build on this strength by adopting best practices for time management and further ensuring adherence to project schedules. In addition, respondents agree that contractors are relatively transparent about cost overruns, though there is some variability in perceptions (Mean: 3.82, Std. Dev: 1.004) implying that strengthening transparency mechanisms (e.g., regular financial reporting and audits) can enhance accountability and stakeholder confidence.

In regards to whether there are always contract variations causing delays at NWSC, it was established that there was a moderately high mean which reflects agreement (Mean =3.78 and Std. Dev =1.007). This means that the organization should implement strategies to minimize contract variations by improving project scoping and planning during the pre-contract phase. Respondents also moderately agree that contract tasks are usually completed on time (Mean: 3.78 and Std. Dev: 1.066). This implies that better monitoring and communication can ensure higher consistency in meeting agreed timeframes. Similarly, mean: 3.62 and Std. Dev: 1.214 showed that there is moderate agreement that quality issues are addressed promptly, but the high standard deviation suggests inconsistencies in practice. This implies that strengthening quality assurance processes and holding contractors accountable can improve the timely resolution of quality issues.

In addition, in regards whether time extensions are always justified and approved, when necessary, a mean of 3.50 and Std. Dev: 1.134 was registered. This suggests that time extensions are not always perceived as justified, with significant variability in perceptions. Lastly, the Mean: 3.34 and Std. Dev: 1.080 showed slightly negative perceptions about contractors' ability to deliver work with minimal variations. This implies that enhancing contractor selection processes and improving contract scoping and clarity can reduce variations.

To complement the descriptive statistics presented, anecdotal evidence was gathered from interviews with procurement officers. For instance, from narrative of Senior Legal officer, she noted that;

“...we have managed to meet almost all our key milestones this year, largely because of improved planning and timely contractor mobilization. For the most part, the contractors are open about cost overruns. They submit variation requests with supporting documents, and we review them as a team. Almost every project ends up

having a variation. Some are minor, but others especially on civil works lead to weeks of delay. Generally, contractors try to stick to the timeline, but it's not always possible. Weather, procurement delays, or approvals can throw things off. When we flagged poor workmanship in one of the buildings, the contractor responded quickly and re-did the work at no cost. That showed professionalism.” Senior Legal officer

4.5 Factor analysis

The study ran the factor analysis for all the study variables as presented below.

Table 4.6: Factor analysis for contract risk assessment

<i>Items</i>	Component s
The organization carries out risk assessment for all contracts	.654
The organization does risk prioritization based on the impact analysis	.734
High-priority risks are allocated appropriate resources and immediately addressed	.771
Our organization involves key stakeholders in the risk management process.	.809
Risks are regularly reviewed and mitigation measures updated to reflect the changes.	.733
Our organization has a detailed contingency plan for high-priority risks.	.809
Eigen Values	3.407
Variance (percent)	56.8%

The table 4.6 above evaluates the factor analysis for risk assessment. Stakeholder involvement and contingency planning emerged as the dominant factors, each demonstrating the highest item loading of (.809). These components reflect a strong influence on the overall construct of risk management, indicating that the organization's engagement of key stakeholders and the presence of robust contingency plans play a critical role in strengthening its risk management framework.

Resource allocation for high-priority risks also showed substantial importance, with an item loading of (.771), signifying that the organization places significant emphasis on deploying adequate resources to address critical risks promptly. Risk prioritization and regular review of risks, with item loadings of (.734) and (.733) respectively, demonstrated considerable

relevance in ensuring that risks are ranked according to their potential impact and that mitigation measures remain up to date. Risk assessment for all contracts, with a loading of (.654), contributed moderately to the overall construct, highlighting its supportive role in the broader risk management process.

The Eigenvalue of (3.407), which is above the threshold of one, confirms the significance of this factor in explaining the underlying structure of risk assessment within the organization. The construct further accounted for 56.8 percent of the variance in the data, indicating a strong level of explanatory power and suggesting that these components collectively represent a well-established and effective risk management framework within the organization.

Table 4.7: Factor analysis for contract administration

<i>Items</i>	Components
Our organization has a specific criteria of appointing contract managers	.640
The contract managers are appointed according to experience and relevant skills	.726
The roles of contract managers is strictly communicated upon appointment	.689
Our organization provides adequate training and orientation for contract managers.	.656
Our organization has a standardized process for developing contract implementation plans.	.710
Contract implementation plans are developed with input from the key stakeholders	.788
Eigen Values	2.968
Variance (percent)	49.5%

Table 4.7 shows the factor analysis results for contract administration. Stakeholder involvement in developing contract implementation plans emerged as the dominant factor, demonstrating the highest item loading of (.788). This indicates that incorporating stakeholder input plays a critical role in strengthening the organization's contract administration processes, as it ensures inclusiveness, clarity, and alignment during contract

execution. The existence of a standardized process for developing contract implementation plans, with an item loading of (.710), also showed strong influence on the overall construct, reflecting the organization's commitment to structured and consistent contract administration practices.

The appointment of contract managers based on experience and relevant skills, with a loading of (.726), demonstrated considerable importance, highlighting the emphasis placed on professional competence when selecting contract managers. The clear communication of roles upon appointment and the provision of adequate training and orientation, with item loadings of (.689) and (.656) respectively, further contributed to shaping effective contract administration by ensuring that contract managers understand their responsibilities and are well-prepared to execute them. The existence of specific criteria for appointing contract managers, with a loading of (.640), moderately influenced the construct, supporting the organization's efforts to maintain objectivity and consistency in the selection process.

The Eigenvalue of (2.968), which exceeds the threshold of one, confirms the significance of this factor in explaining the underlying structure of contract administration within the organization. The construct accounted for 49.5 percent of the variance in the data, indicating a moderate to strong level of explanatory power. These results suggest that the identified components collectively form a coherent and effective framework for contract administration within the organization.

Table 4.8: Factor analysis for contract monitoring

<i>Items</i>	Components
Our organization establishes clear and measurable Key Performance Indicators (KPIs) for each contract.	.646
The KPIs used in our contracts accurately reflect the key objectives and deliverables.	.793
KPIs are regularly reviewed and updated to ensure they remain relevant.	.853
The KPIs are easily understood by all stakeholders involved in the contract.	.839
KPIs are aligned with the overall strategic goals of our organization.	.820
The performance against KPIs is communicated to all relevant parties in a timely manner.	.791
Regular reporting helps in maintaining accountability and transparency in contract management.	.542
Eigen Values	4.070
Variance (percent)	58.1%

In Table 4.8, the factor analysis results for contract monitoring are presented. The construct was evaluated using items related to KPI development, relevance, communication, alignment, and reporting. Regular review and updating of KPIs emerged as the dominant factor, demonstrating the highest item loading of (.853). This indicates that continuously assessing and refining KPIs plays a critical role in enhancing the effectiveness of contract monitoring. Closely following were items on KPI clarity and alignment with organizational goals, with high loadings of (.839) and (.820) respectively, showing that comprehensible performance indicators and strategic alignment strongly influence successful contract oversight.

The accuracy of KPIs in reflecting key objectives and deliverables, with a loading of (.793), also showed substantial importance, underscoring the necessity of using indicators that truly capture contract expectations. The timely communication of performance against KPIs, loading at (.791), further contributed to the construct, highlighting the importance of transparency in ensuring that all parties remain informed throughout the contract lifecycle. Establishing clear and measurable KPIs demonstrated a moderate influence with a loading

of (.646), supporting the foundational role of well-defined indicators in contract monitoring. Regular reporting, with a loading of (.542), provided additional but relatively lower support to the construct, indicating that while reporting is essential, its influence is more complementary in nature.

The Eigenvalue of (4.070), which surpasses the threshold of one, confirms the statistical significance of this factor in explaining the underlying structure of contract monitoring practices. The construct accounted for 58.1 percent of the variance in the data, indicating a strong level of explanatory power. These results suggest that the identified components collectively represent a well-established and effective framework for monitoring contracts within the organization.

Table 4.9: Factor analysis for contract performance

<i>Items</i>	Components
The contract tasks are completed within the agreed-upon timeframes.	.848
The project milestones are achieved according to the schedule	.652
There are always contract variations causing delays	.851
Time extensions are always justified and approved when necessary	.738
The contractor has been transparent about any additional costs incurred	.623
The contractors always deliver work with minimal variations	.682
Any quality issues have been promptly addressed by the contractor in accordance with the contract terms and conditions	.761
Eigen Values	3.844
Variance (percent)	54.9%

Results in Table 4.9 presents the factor analysis for contract performance. The construct was assessed using items related to timeliness, schedule adherence, contract variations, cost transparency, and quality management. Contract variations causing delays emerged as the dominant factor, demonstrating the highest item loading of (.851). This indicates that the presence or absence of variations plays a critical role in shaping overall contract

performance. Closely related to this was the completion of contract tasks within agreed-upon timeframes, which also showed a strong influence with a loading of (.848), highlighting the centrality of timely delivery in evaluating contract outcomes.

Quality management and justification of time extensions also showed substantial importance in the construct. Addressing quality issues promptly, with a loading of (.761), reflected the significance of ensuring that deliverables meet contractual standards. Time extensions being justified and approved when necessary, with a loading of (.738), further emphasized the importance of maintaining procedural integrity during project execution. Minimal variations in contractor deliverables, loading at (.682), indicated the relevance of consistency in performance. The achievement of project milestones according to schedule, with a loading of (.652), contributed moderately to the construct, supporting the broader importance of schedule compliance. Contractor transparency regarding additional costs incurred, with a loading of (.623), also provided moderate influence, highlighting the value of openness in financial matters.

The Eigenvalue of (3.844), which is above the threshold of one, confirms the statistical significance of this factor in explaining the underlying structure of contract performance within the organization. The construct accounted for 54.9 percent of the variance, indicating a strong level of explanatory power. Overall, the results suggest that the identified components collectively form a coherent and effective framework for assessing contract performance.

4.6 Correlation findings

The correlation analysis was conducted to evaluate the relationships between the key variables of contract risk assessment, contract administration, contract monitoring, and contract performance. This analysis aimed understanding the strength and direction of

associations between these variables, providing a foundation for performing regression tests to understand their interdependencies and their potential contribution to improving contract performance at NWSC.

Table 4.10: Correlation results

Variables		1	2	3	4
Contract Risk Assessment (1)	Pearson Correlation	1			
Contract Administration (2)	Pearson Correlation	.270**	1		
Contract Monitoring (3)	Pearson Correlation	.274**	.116**	1	
Contract Performance (4)	Pearson Correlation	.277**	.319**	.604**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Primary data (2024)

From the correlation results in Table 4.10 above, it is observed that there is a positive and statistically significant correlation between Contract Risk Assessment and Contract Performance ($r = 0.277$, $p < 0.01$). This indicates that better risk assessment practices are associated with improved contract performance. Therefore, at NWSC, incorporating robust risk assessment tools and methodologies can prevent project delays or cost overruns.

Similarly, the correlation between Contract Administration and Contract Performance ($r = 0.319$, $p < 0.01$) is also positive and statistically significant. This means that effective contract administration ensuring clarity in roles, timelines, and deliverables directly influences performance outcomes. Clearly defining expectations and maintaining open communication between NWSC and contractors could improve compliance and reduce disputes. Lastly, results showed that contract monitoring and contract performance ($r = 0.604$, $p < 0.01$), had the strongest correlation among the variables, indicating that contract monitoring has a substantial effect on contract performance. It highlights the critical role of oversight in ensuring adherence to quality, timelines, and compliance.

4.7 Regression results

The multiple regression analysis was performed to establish the influence of contract management on contract performance. This aligns with the objectives of the study.

4.7.1 Hierarchical multiple regression

The extended regression analysis, incorporating demographic factors such as age, gender, education, and experience, was conducted to explore how individual attributes affect contract performance alongside contract management practices. The results below provide nuanced insights into how personnel characteristics intersect with contract management to affect contract performance.

Table 4. 11: Hierarchical multiple regression

	Model 1			Model 2			Model 3			Model 4		
Variable	B	Std. Error	Beta	B	Std. Error	Beta	B	Std. Error	Beta	B	Std. Error	Beta
Gender of respondents	4.736	.373	-.176	-.302	.123	-.190	-.222	.122	-.140	-.175	.098	-.110
Age of the respondent	-.279	.126	-.221	-.203	.078	-.207	-.229	.076	-.234	-.188	.061	-.192
Level of education	-.216	.080	-.192	-.071	.044	-.130	-.066	.042	-.120	-2.842	.035	.000
Years of Experience	-.105	.043	.087	.076	.072	.084	.076	.070	.084	.187	.057	.207
Contracts handled	.079*	.074	.098*	.048*	.055	.068*	.038*	.054	.054*	.033*	.043	.046*
RA				.230**	.076	.242**	.167**	.077	.175**	.050**	.063	.052**
CA							.242**	.078	.248**	.219**	.063	.224**
CM										.558**	.062	.583**
R ²	0.117			0.171			0.224			0.507		
Adjusted R ²	0.086			0.136			0.186			0.479		
F-Statistic	F=3.766, P<0.05			F=4.851, P<0.05			F=5.787, P<0.05			F=17.903, P<0.05		
Note												
a) ** p<0.01, * p<0.05												
b) Std Error: Standard Error												
c) Dependent variable: Contract performance												
d) Model 1=Individual factors (Gender, Age, Education, Level of education, Years of Experience, Contracts handled)												
Model 2= contract risk assessment												
Model 3=Contract administration												
Model 4=Contract monitoring												

Source: Primary data (2024)

The results demonstrated in the Table 4.11 above provide detailed analysis of the combined influence of demographic factors and contract management on contract performance. The findings are presented step-by-step across the models to identify trends. The F-statistic and p-values < 0.05 across models confirm that each subsequent addition of predictors improves the model significantly.

Focusing on each model, according to Model 1, the R Square (0.117) reveals that 11.7% of the variance in contract performance is explained by demographic factors (gender, age, education, experience, and contracts handled). However, the Adjusted R Square (0.086) shows that demographic factors alone are not strong predictors of performance.

In Model 2, the R Square (0.171) revealed that when contract risk assessment is added to the model, it increases the variance explained to 17.1%, indicating its significant contribution. This is confirmed by Adjusted R Square (0.136) which also proves that the model improvement is evident. In Model 3, the R Square (0.224) shows that adding contract administration raises explanatory power to 22.4%, reinforcing its effect on performance. In Model 4, the R Square (0.507) further reveals that the inclusion of contract monitoring dramatically improves the model, explaining 50.7% of the variance.

In model 2-4 where contract management dimensions are added into the regression model, it is evident that contract risk assessment is significant in Models 2 and 3 ($p < 0.05$), with positive Beta values indicating it enhances contract performance. Meanwhile, risk assessment loses significance in Model 4, likely due to its influence being captured by other practices like monitoring. Contract Administration on the other hand was consistently significant across model 3 and 4 ($p < 0.05$, Beta = 0.224 in Model 4) implying that contract administration is a

key predictor of contract performance. Lastly, Contract Monitoring emerged as the strongest predictor in Model 4 ($p < 0.001$, Beta = 0.583).

Therefore, the findings underline the paramount importance of contract monitoring and administration in achieving optimal performance. Demographics and contract risk assessment are secondary but remain relevant. For NWSC, focusing on integrated, efficient, and technology-driven contract management will yield the best outcomes.

CHAPTER FIVE: SUMMARY, DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusion and discussion of findings in line with the study objectives. The chapter also shows the recommendations to managers, limitations and areas for further research

5.2 Summary of findings

For the correlation results, it is observed that there is a positive and statistically significant correlation between contract risk assessment and contract performance ($r = 0.277$, $p < 0.01$). Similarly, the correlation between Contract Administration and Contract Performance was positive at significant at ($r = 0.319$, $p < 0.01$) Lastly, results showed that contract monitoring and contract performance are related at ($r = 0.604$, $p < 0.01$)

From the hierarchical regression, according to Model 1, it was revealed that 11.7% of the variance in contract performance is explained by demographic factors (gender, age, education, experience, and contracts handled). In Model 2, it was revealed that when contract risk assessment is added to the model, it increases the variance explained to 17.1%, indicating its significant contribution. Then, in model 2-4 where contract management dimensions are added into the regression model, it is evident that contract risk assessment is significant in Models 2 and 3 ($p < 0.05$), with positive Beta values indicating it enhances contract performance. Meanwhile, risk assessment loses significance in Model 4, likely due to its influence being captured by other practices like monitoring. Contract Administration on the other hand was consistently significant across model 3 and 4 ($p < 0.05$, Beta = 0.224 in Model 4) implying that

contract administration is a key predictor of contract performance. Lastly, Contract Monitoring emerged as the strongest predictor in Model 4 ($p < 0.001$, Beta = 0.583).

5.3 Discussion of findings

The findings of this study shed light on the influence of contract management on contract performance at National Water and Sewerage Corporation as discussed below.

5.3.1 Contract risk assessment and contract performance

The findings reveal that contract risk assessment significantly predict contract performance ($\beta = .057$, $p < 0.05$). This suggests that although there may be a weak relationship between risk assessment practices and contract performance, the effect is statistically validated in this study. The findings of this study align with existing literature, affirming the positive but modest role of contract risk assessment in influencing contract performance. For example, Jones et al. (2019) highlighted that thorough risk identification and mitigation strategies are likely to affect project outcomes, including adherence to timelines, budgets, and stakeholder satisfaction.

This result only partially aligns with previous literature. For instance, Jones et al. (2019) found that robust risk identification and mitigation strategies positively affect key performance outcomes such as time, cost, and stakeholder satisfaction. Similarly, Smith and Johnson (2018) emphasized that organizations that adopt comprehensive risk assessment frameworks tend to experience fewer disruptions during contract execution. However, the insignificant finding in this study suggests that the effectiveness of risk assessment may depend on how deeply these practices are embedded into the overall contract lifecycle, which may not be the case in the current organizational context.

In line with this, Liu and Yuan (2018) and Wang et al. (2019) argue that risk assessment on its own may not significantly influence performance unless coupled with effective implementation and risk-sharing mechanisms, such as stakeholder collaboration and adaptive contract clauses. Additionally, Li et al. (2021) recommends integrating contract risk assessment with broader performance monitoring and decision-making frameworks to enhance its impact.

The relatively low standardized coefficient further highlights the limited explanatory power of contract risk assessment in isolation. This suggests that other factors such as contract administration and monitoring, which were found to be statistically significant in this study play a more decisive role in shaping contract performance outcomes.

In conclusion, while contract risk assessment remains an important aspect of contract management, its standalone effect on performance is limited in this context. The findings indicate a need for NWSC to strengthen the operationalization of risk assessment processes and integrate them within a broader contract management strategy to effectively mitigate uncertainties and enhance performance outcomes.

5.3.2 Contract administration and contract performance

The regression results indicate that contract administration has a positive and statistically significant effect on contract performance ($\beta = .233, p < 0.05$). This implies that improvements in contract administration processes such as documentation, compliance tracking, and communication, significantly enhance the performance of contracts. This finding supports the work of Kumar and Nambisan (2019) who found that effective contract administration practices, such as timely communication, clear documentation, and proactive issue resolution, are positively correlated with improved contract outcomes.

These findings align with the work of Jones and Weckler (2018), who emphasized that elements such as contract clarity, stakeholder engagement, and well-structured communication channels are central to enhancing contract performance in public sector projects. These elements are typically embedded within administrative processes and appear to play a significant role in the context of NWSC's contract management system.

Furthermore, the current results are consistent with studies by Smith et al. (2020) and Osei-Kyei and Chan (2018), who found that strong contract administration practices help build trust, reduce ambiguity, and improve responsiveness to emerging challenges during implementation. The statistically significant influence found in this study supports the argument that proper oversight and administrative diligence enhance not just compliance, but also contractor performance and service delivery quality.

Although the model does not isolate specific administrative practices, the significant regression coefficient ($\beta = 0.233$) reflects the broader importance of systematic administration, including documentation, reporting, change management, and coordination mechanisms. This complements the insights from Wang and Chien (2017), who highlighted that embedded monitoring and control mechanisms within administrative processes ensure accountability and adherence to contractual obligations.

While digital tools for contract management were not explicitly explored in this study, related literature such as Sun et al. (2021) has underscored their value in streamlining administrative workflows, enhancing transparency, and minimizing human error. These technologies have the potential to amplify the positive effects observed in this study and could be explored in future research or integrated into NWSC's practices.

In conclusion, the findings reaffirm the critical role of contract administration in enhancing contract performance, in line with prior studies. However, the model's moderate explanatory power also indicates that administrative effectiveness should be supported by complementary strategies notably contract monitoring and risk assessment to achieve optimal contract outcomes. For NWSC, this highlights the importance of continuous investment in administrative capacity, improved communication structures, and potential integration of digital contract management platforms.

5.3.3 Contract monitoring and contract performance

The results further show that contract monitoring has the strongest positive and statistically significant effect on contract performance ($\beta = .535$, $p < 0.05$). This indicates that robust monitoring mechanisms such as performance reviews, site inspections, and compliance audits are critical determinants of successful contract execution. This finding resonates with prior studies such as Smith et al. (2019), who found that regular monitoring activities, such as performance audits and progress reviews, significantly improved performance outcomes in the healthcare sector.

These results support the work of Jones and Patel (2018), who emphasized the role of proactive monitoring in reducing contract breaches, delays, and disputes within public procurement contracts. The strong positive association found in the current study echoes their findings, reinforcing that continuous oversight and timely intervention are vital for achieving contractual objectives. Furthermore, this study aligns with research by Kim et al. (2020) and Wang and Liu (2019), who highlighted the transformative impact of technological advancements in monitoring, including the use of real-time tracking systems, IoT devices, and blockchain for enhanced transparency and accountability. While NWSC may not have fully adopted these

technologies, the significant relationship between monitoring and performance suggests potential benefits from integrating such tools into its contract management systems.

The importance of clear performance metrics and key performance indicators (KPIs) is also reflected in the findings, aligning with studies by Eisenberg (2020) and Li and Zhang (2018). These scholars found that well-defined KPIs guide monitoring efforts, help detect performance gaps early, and promote continuous improvement. Similarly, the results support Chen et al. (2021), who argue that comprehensive scorecards improve monitoring accuracy and performance assessment across contract phases. The significance of contract monitoring also resonates with Gupta and Kumar (2020), who noted that performance-based contracts incentivize stronger monitoring practices and ultimately lead to higher service delivery standards. The evidence from this study suggests that NWSC's investments in monitoring particularly in developing staff capacity, conducting regular performance evaluations, and strengthening feedback loops can yield substantial improvements in contract performance.

In conclusion, the findings clearly establish contract monitoring as a key determinant of contract performance, consistent with existing literature. For NWSC, this underscores the need to prioritize and enhance monitoring frameworks, including adopting modern technologies, defining measurable KPIs, and institutionalizing regular review mechanisms. Doing so will not only improve compliance and accountability but also drive consistent improvements in contract execution outcomes.

5.4 Conclusion

In conclusion, the study highlights the distinct yet complementary roles of contract risk assessment, administration and monitoring in influencing contract performance. While contract

monitoring emerged as the most significant predictor ($\beta = 583^{**}$), all three factors are critical in ensuring successful contract execution. Specifically, the findings demonstrate that contract risk assessment had the lowest and statistically significant influence ($\beta = 242^{**}$) on contract performance at NWSC. This indicates that while contract risk assessment contributes to improved contract performance, it is not the sole determinant.

The study found that contract administration had a statistically significant and positive effect on contract performance at NWSC ($\beta = .248^{**}$). The findings confirm existing literature, which highlights the value of strong administrative frameworks in fostering trust, reducing disputes, and ensuring compliance. However, the modest explanatory power suggests that contract administration alone is insufficient to drive optimal outcomes and should be complemented by other contract management practices.

Lastly, contract monitoring emerged as the most significant predictor of contract performance in this study. The results suggest that investments in real-time monitoring technologies, performance audits, and the definition of clear metrics can significantly enhance contract performance.

Therefore, for NWSC, a holistic approach that integrates robust contract risk assessment, effective administration and proactive monitoring, will be essential in achieving sustained improvements in contract performance.

5.5 Recommendations

Based on the findings, this study recommends the following;

NWSC should integrate systematic risk assessment into the early stages of contract planning. This can be achieved by Conducting mandatory pre-contract risk workshops for all project teams and use simple, practical tools such as risk registers, probability–impact matrices, and supplier risk scoring templates.

NWSC and other agencies should develop and circulate to all staff the Standard Operating Procedures (SOPs) that clearly outline roles, approval steps, documentation requirements, communication channels, and dispute escalation paths. It should create simple contract administration checklists (e.g., delivery tracking forms, quality verification sheets, and supplier performance scorecards).

To enhance transparency and performance tracking, NWSC and other agencies should introduce affordable digital tools such as contract management dashboards, mobile data collection apps, and GPS-enabled field reporting systems to monitor contractor activities in real time.

5.6 Contribution to the study

5.6.1 Contribution to Knowledge

The study advances scholarly understanding by empirically demonstrating the differentiated influence of contract risk assessment, administration and monitoring on contract performance within a public utility setting. It highlights that although all three components significantly contribute to contract performance, contract monitoring stands out as the strongest predictor, thereby enriching existing theoretical models that often treat contract management activities as equally weighted. Furthermore, the study provides context-specific evidence from NWSC, contributing to the limited body of literature on contract performance in developing-country public institutions. This nuanced insight particularly the modest but significant role of risk

assessment and administration adds depth to ongoing academic debates on the drivers of effective contract management.

5.6.2 Contribution to Practice

Practically, the study provides managers and practitioners at NWSC and similar institutions with evidence-based guidance on prioritizing contract management activities. The findings emphasize the need to strengthen real-time monitoring systems, performance audits, and clear performance metrics, as these have the greatest impact on contract outcomes. Additionally, the study underscores that while risk assessment and contract administration are important, they must be integrated with robust monitoring efforts to produce meaningful improvements. Practitioners can therefore use the results to design more balanced and efficient contract management frameworks, improve resource allocation, and enhance overall operational performance.

5.6.3 Contribution to Policy

From a policy perspective, the study offers valuable insights for shaping institutional and national procurement or contract-management policies. The demonstrated importance of contract monitoring suggests that policy frameworks should prioritize investments in monitoring technologies, capacity building, and compliance mechanisms. The findings also highlight the need for policies that encourage comprehensive contract management approaches rather than isolated interventions, ensuring that risk assessment, administration, and monitoring are embedded cohesively in public procurement guidelines. Policymakers can leverage these insights to update standard operating procedures, strengthen accountability structures, and promote improved contract performance across public institutions.

5.7 Limitations and Delimitations of the Study

The researcher experienced some limitations.

Respondents may have purposefully withheld from researcher the necessary information required to complete the study. The study acknowledges that findings may not have been fully generalizable beyond the study's scope. The study also recognizes potential biases in the sample, such as self-selection bias in survey respondents. However, the study provided for how to deal with the respondents of that nature by explaining clearly the intent of the study and confidentiality consideration in the entire study. The respondents were assured that data was to be used for academic purposes and that was to be handled with the highest care.

5.8 Area of further study

Further studies should investigate how organizational culture, leadership styles, and employee engagement influence the effectiveness of contract management processes and overall contract performance outcomes.

Some studies should examine the differences in contract management between public and private sectors to identify best practices that can be adapted for improved contract performance in government agencies.

REFERENCES

- Ahimbishibwe, A. &. (2015). Contract management, inter functional coordination, trust and contract performance of works contracts in Ugandan public procuring and disposing entities. *European Journal of Business and Management*, 7(20).
- Ampumuza, G. J. (2020). *Ampumuza, G. J., Okaka, W., O Assessing decentralized contract life cycle management issues and challenges.*
- Bendickson, J. M. (2016). Agency theory: the times, they are a-changin. *Management decision*, 174-193.
- Benton, W. C. (2019). *Purchasing and Supply Chain Management*. Pearson.
- Chen, Y. &. (2019). Governance Mechanisms in Government Contracts: Their Effects on Contract Performance. *International Journal of Project Management*, 37(8), 1025-1039.
- Chen, Y. e. (2020). Proactive Risk Identification and Its Impact on IT Project Performance. *Information & Management*, 103339.
- Chen, Y. e. (2021). Performance Scorecards for Interorganizational Contracts: Development and Application. *International Journal of Production Economics*, 238.
- Eisenberg, P. (2020). *Contract Law: Understanding Contracts in Law*. Pearson.
- Gupta, A. &. (2020). Performance-Based Contracting and Service Delivery: Evidence from Public Sector Contracts. *Journal of Operations Management*, 67((1-2)), 82-97.

- Hassan, A. &. (2023). Contract Management and Procurement Performance of State Corporation in Kenya. *International Journal of Social Science and Humanities Research*, 1(1), 30-48.
- Jensen &Meckling. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3(4), 305-360.
- Jones & Weckler. (2018). Contract Management's Impact on Project Outcomes. *Journal of Management in Engineering*, 34(2).
- Jones, D. &. (2018). Proactive Contract Monitoring and Its Impact on Public Procurement Performance. *Journal of Public Procurement*, 18(4), 419-440.
- Jones, S. &. (2019). Improving Service Delivery Through Effective Contract Management: Lessons from Government Ministries. *Journal of Public Policy and Administration*, 25(3), 301-325.
- Kim, S. &. (2017). Risk Identification Techniques and Supply Chain Performance: A Moderated Mediation Model. *International Journal of Production Economics*, 193,350-359.
- Kim., e. a. (2020). IoT-Enabled Real-Time Monitoring in Construction Projects: Adoption, Benefits, and Challenges. *Automation in Construction*.
- Komakech, R. A. (2020). Contract Management and Service Delivery in Local Governments in Uganda. *International Journal Advances in Social Science and Humanities*, 8(2), 1-23.

- Kumar & Nambisan. (2019). Impact of Contract Administration on Construction Project Performance. *Engineering, Construction and Architectural Management*, 26(9), 1965-1983.
- Li, L. &. (2018). Key Performance Indicators for Outsourced Service Contracts: Development and Application. *Service Business*, 12(2), 325-346.
- Liu, Y. &. (2018). Proactive Risk Management and Contract Performance: The Role of Risk-Sharing and Collaborative Risk Mitigation. *Journal of Operations Management*, 44-61.
- Mangeni, M. (2020). Service quality and customer satisfaction at the National Water and Sewerage Corporation,. *Uganda. Journal of Water Supply: Research and Technology-AQUA*,, 69, 443-457.
- Mangeni, M. N. (2020). Service quality and customer satisfaction at the National Water and Sewerage Corporation, Uganda. *Journal of Water Supply: Research and Technology-AQUA*, 69(5), 443-457.
- Mukwaya, J. P. (2018). Procurement and contracting practices in Uganda's National Water and Sewerage Corporation: Implications for public sector performance. *International Journal of Business and Management Invention*, 7(4), 65-72.
- Mutua, J. M. (2014). The influence of contract management on the performance of outsourced projects in medium manufacturing enterprises in Nairobi County, Kenya. *International Journal of Business and Social Science*, 5(9).

National Water and Sewerage Corporation. (2023). *Integrated Annual Report 2023/24*.
Kampala: National Water and Sewerage Corporation, .

Obanda, P. (2010). *Fighting corruption in tactical procurement*.

Office of the Auditor General, U. (2023). *Report of the Auditor General to Parliament: National Water and Sewerage Corporation*. Kampala: Office of the Auditor General, Uganda.
(2023). Report of the Auditor General to Parliament: National Water and Office of the Auditor General.

Okaka, F. O. (2019). Analysis of cost overruns in Uganda's water sector: A case study of National Water and Sewerage Corporation projects. *Journal of Engineering, Project, and Production Management*, 9(1), 42-53.

Osei-Kyei, R. &. (2018). Review of Studies on the Critical Success Factors for Public–Private Partnership (PPP) Projects from 1990 to 2013. *International Journal of Project Management*, 36(2), 219-236.

PPDA, P. P. (2022). *PPDA annual report 2021/2022*. Kampala: Public Procurement and Disposal of Public Assets Authority (PPDA). (2022). PPDA annual report 2021/2022.
PPDA.
https://www.ppda.go.ug/download/ppda_annual_reports/ppda_annual_reports/PPDA-ANNUAL-REPORT-2021-2022.pdf. PPDA.

Rashid, I. ,. (2019). Contract management and performance characteristics: An empirical and managerial implication for Indonesia. *Management Science Letters*, 9(8), 1289-1298.

- Ross, S. A. (1973). The Economic Theory of Agency: The Principal's Problem. *American Economic Review*, 63(2), 134-139., 63(2), 134-139.
- Rotich, J. C. (2014). *Contract management practice and operational performance of state corporations in Kenya* . Kenya: Doctoral dissertation, University of Nairobi.
- Schindler, M. (2017). *Risk Management and Innovation in the Public Sector*. Springer.
- Schwab, A. &. (2019). The impact of contract management system on contract performance in the procurement of complex products and systems. *International Journal of Production Economics*, 208, , 425-435.
- Sekaran, U. (2003). *Research methods for business: A skill-building approach* (4th ed.). New York: John Wiley & Sons.
- Smith & Johnson. (2018). Systematic Risk Assessment and Its Impact on Government Contract Performance. *Public Administration Review*, 78(3), 395-408.
- Smith, J. e. (2019). The Influence of Proactive Contract Monitoring on Healthcare Contract Performance. *Journal of Healthcare Management*, 64(6), 402-417.
- Smith, S. W. (2020). Communication in Contract Administration: The Role of Trust and Culture. *Construction Management and Economics*, 38(10), 885-900.
- Sun, H. e. (2021). The Impact of Contract Management Systems on Healthcare Contract Performance. *Sun, H., et al. (2021). The Impact of Contract Management Sy International Journal of Environmental Research and Public Health*, 18(11), 6032.

- Thai, K. V. (2017). *Public procurement: Concepts and practices*. Florida: Taylor & Francis Group.
- UCMC., U. C. (2023). *Reports / monitoring resources*. kampala: Uganda Contracts Monitoring Coalition. Retrieved from <https://ucmc.ug/> (see “Reports”/Resources). ucmc.ug
- Verma, V. P. (2016). *Construction Contracts: Practice and Procedure*. CRC Press.
- Wang, W. &. (2017). Performance Measurement Systems, Contractual Governance, and Contract Performance in Supply Chain Contracts. *International Journal of Production Economics*, 511-521.
- Wang, X. &. (2019). Blockchain-Based Contract Monitoring in Supply Chain Contracts: Implementation and Impact. *International Journal of Production Economics*, 211-223.
- Wang, X. e. (2019). Risk Transfer Mechanisms and Contract Performance: Evidence from the Energy Sector. *Energy Economics*, 797-807.
- Zangirolami-Raimundo, J. E. (2018). Research methodology topics: Cross-sectional studies. *Journal of Human Growth and Development*, 28(3), 356-360.
- Zu & Kaynak. (2012). An agency theory perspective on supply chain quality management. *International Journal of Operations & Production Management*, 32(4).

APPENDICES

Appendix 1: Questionnaire

Dear respondent,

The researcher is a student of Masters in Business Administration of Kyambogo University. I am conducting research on the relationship between contract management and contract performance, a case study of National Water and Sewerage Cooperation. The study aims at establishing what key contract management dimensions can be enhanced to foster contract performance. You have been identified as the respondent to this questionnaire. Your responses will be treated with utmost care and will be purely for academic purpose.

Your response is highly appreciated.

Please tick in the box the option of your choice

SECTION A: DEMOGRAPHICS

1. Gender of respondents.

- a) Male ☐
- b) Female ☐

2. How old are you?

- a. 18 -30 years ☐
- b. 31 - 40 years ☐
- c. 41 - 50 years ☐
- d. 51-60 years ☐
- e. 60+ years ☐

3. What is your level of education?

- a) Certificate ☐
- b) Diploma ☐
- c) Bachelors ☐
- d) Masters ☐

If others, please specify.....

4. Years of Experience in Contract Management:

- a) 0-5 years ☐
- b) 6-10 years ☐
- c) 11-15 years ☐
- d) 16+ years ☐

5. Types of contracts primarily handle (Select all that apply)

- a) Goods ☐
- b) Services ☐
- c) Works ☐
- d) Consultancy ☐
- e) Others (please specify).....

SECTION B: RISK ASSESSMENT

Please indicate your level of agreement with the following statements using a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree):

Strongly disagree (SD)		Disagree (D)	Not sure (NS)	Agree (A)	Strongly agree (SA)				
1		2	3	4	5				
					1	2	3	4	5
RA1	Risks are regularly reviewed and mitigation measures updated to reflect the changes.								
RA2	High-priority risks are allocated appropriate resources and immediately addressed								
RA3	Our organization involves key stakeholders in the risk management process.								
RA4	Our organization has a detailed contingency plan for high-priority risks.								
RA5	The organization does risk prioritization based on the impact analysis								
RA6	The organization carries out risk assessment for all contracts								

SECTION C: CONTRACT ADMINISTRATION

Please indicate your level of agreement with the following statements using a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree):

Strongly disagree (SD)		Disagree (D)	Not sure (NS)	Agree (A)	Strongly agree (SA)				
1		2	3	4	5				
Code	Items	1	2	3	4	5			
CA1	Our organization provides adequate training and orientation for contract managers.								
CA2	Our organization has a standardized process for developing contract implementation plans.								
CA3	Contract implementation plans are developed with input from the key stakeholders								
CA4	The roles of contract managers are strictly communicated upon appointment								
CA5	Our organization has a specific criteria of appointing contract managers								
CA6	The contract managers are appointed according to experience and relevant skills								

SECTION D: CONTRACT MONITORING

Please indicate your level of agreement with the following statements using a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree):

Strongly disagree (SD)		Disagree (D)	Not sure (NS)	Agree (A)	Strongly agree (SA)				
1		2	3	4	5				
		1	2	3	4	5			
CM1	The performance against KPIs is communicated to all relevant parties in a timely manner.								
CM2	KPIs are aligned with the overall strategic goals of our organization.								
CM3	Regular reporting helps in maintaining accountability and transparency in contract management.								

CM4	KPIs are regularly reviewed and updated to ensure they remain relevant.					
CM5	The KPIs are easily understood by all stakeholders involved in the contract.					
CM6	Our organization establishes clear and measurable Key Performance Indicators (KPIs) for each contract.					
CM7	The KPIs used in our contracts accurately reflect the key objectives and deliverables.					

SECTION D: CONTRACT PERFORMANCE

Please indicate your level of agreement with the following statements using a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree):

Strongly disagree (SD)	Disagree (D)	Not sure (NS)	Agree (A)	Strongly agree (SA)
1	2	3	4	5
CP1	The project milestones are achieved according to the schedule			
CP2	The contractor has been transparent about any additional costs incurred			
CP3	There are always contract variations causing delays			
CP4	The contract tasks are completed within the agreed-upon timeframes.			
CP5	Any quality issues have been promptly addressed by the contractor in accordance with the contract terms and conditions			
CP6	Time extensions are always justified and approved when necessary			
CP7	The contractors always deliver work with minimal variations			

Thank you for your response

Appendix 2: Interview guide

Section A: Demographic Information

- i. Age
- ii. Sex
- iii. Education level
- iv. Work experience
- v. Role in the organization

Section B: Interview questions

1. Would you please elaborate on the criteria your organization uses to recruit contract managers?
2. How does your organization develop implementation plans for contracts and the key components?
3. Can you describe the process your organization uses to identify and prioritize risks in contracts?
4. What steps are included in your contingency planning process?
5. How does your organization establish KPIs for monitoring contract performance?
6. Can you describe the process of regular performance reporting in your organization?
7. What are the most significant challenges your organization faces in contract administration, risk assessment, and monitoring?
8. Can you share any best practices or successful strategies your organization has implemented in contract management?
9. What recommendations would you make for improving contract management in your organization?
10. Do you have any additional insights or comments on the relationship between contract management and contract performance?

Appendix 3: Introduction Letter

Appendix 4: Acceptance Letter

Appendix 5: Plagiarism Report