PROCUREMENT PLANNING ON CONSTRUCTION PROJECT PERFORMANCE: FACTORS AFFECTING INFRASTRUCTURE PROJECTS IN KAMPALA CITY

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DECLARATION

I, Asio Martha Okiring, declare that, to the fullest extent of my knowledge, the information and details included in this dissertation is my original work and has not been authored or replicated from anywhere else for any academic award.

Signature: …….. Date: …….

APPROVAL

I, the undersigned, certify that I have read and recommend that this dissertation be submitted in fulfilment of the requirements for the award of Master of Science in Construction Technology and Management of Kyambogo University.

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DEDICATION

I would like to dedicate this dissertation to my family, friends and to all students who may find this information useful in the future

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I thank God for His help in completing this dissertation. I would like to also acknowledge the following people, who contributed and made it possible for me to write this proposal.

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May God grant you abundant blessings.

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ABSTRACT

The procurement process involves recognizing the demands of a project, outlining its specifications, and securing the right contractors that are crucial for finishing a construction project successfully in terms of cost, schedule, and quality. In Uganda, there have been issues with procurement in terms of accountability, scheduling conflicts, and budget overruns in construction projects. This study looked at the effect of procurement planning and how it influences the success of construction projects. Procurement planning was studied as an independent variable to determine its effect on project performance. The dependent variable in this study was project performance, which was assessed based on time, cost, and quality using a descriptive survey research design. The data was collected from construction clients, contractors and consultants through questionnaires. The study findings established that contemporary procurement within construction projects incorporate planning phase prior to the initiation of bidding. Despite the implementation of these measures during the planning stage, a notable discrepancy exists as numerous construction projects experience delays, and cost overruns. The survey reveals a strong agreement on the necessity of assessing client needs at 78% and material assessment at 86% during the planning stage. It emphasizes the necessity for all stakeholders to synchronize these elements before the commencement of the bidding process, as they profoundly influence project cost, construction timeline, quality of the final deliverables, and overall customer satisfaction.

Key words: Procurement process, procurement planning, project performance, construction projects.

CHAPTER ONE: INTRODUCTION

1.1 Introduction

This study shows how the effect of procurement planning influences the success of construction projects. The current procurement planning activities carried out in construction projects in Kampala were studied to determine their effect on project performance. Procurement planning was studied as the independent variable while the dependent variable in this research was project performance. Time, cost, and quality were the parameters to meausure performance. The study background, problem statement, main and specific objectives will all be covered in this chapter. Additionally, it contains the study's significance, its justification for being conducted, and its conceptual framework.

1.2 Background of Study

The construction industry is undeniably one of the fundamental parts of many countries' economies. The purpose of the construction industry is seen by the fact that all population in modern societies is in one way or another directly influenced by its procedures and products (Omondi, 2013). Construction projects contain methods that have an impact on environmental health and safety and the end products are used by all.

The majority of construction projects were completed before World War II in 1939 using conventional procurement techniques that had remained mostly unaltered for more than 150 years (Greenhalgh & Squires, 2011). Since then, different procurement systems have substantially increased. These systems have been used and shared across different countries. With a few small exceptions made in the private sector to reduce costs, delays, and conflicting relationships by using contractor-centered strategies such as design and build system, the majority of constructions were performed with lump sum contracts (the

traditional system) in the early twentieth century. In September 1983, an article by Peter Kraljic showed that purchasing goes beyond simply buying, but is procurement and supply management. This Kraljic theory showed that procurement influences the achievements of organisations and projects including construction projects (Nshemereirwe, 2015).

Construction projects usually involve complex processes and include several stakeholders. These stakeholders are the clients, the architects' team, the contractors, the end users and the respective governing bodies. This means that these projects have complex contractual relationships and stand as a risk for disputes and bureaucracy in a plea to satisfy all parties. The ultimate result is a delay if not planned and managed effectively. Due to the numerous aspects affecting a building project, it can be challenging for clients to choose a procurement strategy. Additionally, because different clients have distinct wants and expectations, building projects vary greatly in every way, making it impossible for a single technique of procurement to be appropriate for every project. (Chinedum et al., 2019).

Procurement planning is a strategic, pre-contract phase process that establishes how goods, services, and works will be acquired and managed, with the aim to optimize value, mitigate risk, ensure timeliness, and maintain quality.

Globally, standards and guidelines such as those from the World Bank, UN's Sustainable Procurement frameworks, and ISO 20400 Sustainable Procurement emphasize that procurement planning should be systematic, transparent, and aligned with broader project management and governance objectives (WorldBank, 2017).

Issues commonly faced in many countries include poor or late needs assessment, scope creep, underestimation of risks, delayed release of funds, and weak stakeholder involvement. These often lead to cost overruns, delays, and reduced quality in construction projects. Countries with more mature public procurement systems tend to do better in aligning procurement planning with project performance, through robust legal frameworks, regulatory oversight, and capacity building in procurement units (Arrowsmith, 2010).

In Uganda the PPDA Act, 2003 (Public Procurement and Disposal of Public Assets Act) which sets out principles, procedures, and responsibilities for procurement. Procurement Planning Units (PDUs) are mandated to prepare Annual Procurement Work Plans (often consolidated with approved budgets), conduct market surveys, evaluate risk, and ensure timely procurement processes.

There is also the greater push for accountability, transparency, and adherence to procurement regulations, partly driven by national policy and donor requirements. National Procurement Plans (e.g. FY 2024-2025) indicate large public sector commitments to service contracts, construction, maintenance, infrastructure works etc. However, the construction sector has come under fire for inefficiencies in results like time and cost overruns, low efficiency, poor quality, and insufficient customer satisfaction in many countries (Omondi, 2013). It is therefore important that there is a radical change in not only service delivery in the construction field but also a change in attitude and behaviour towards construction. This can facilitate positive change in construction projects to deliver successful results. In this context, The measure of success being time, cost and quality of work done. The procurement practices in the construction sector in

Uganda is conventional. Contractors are distinct from client organisations. Typically, clients hire consultants to plan and oversee building projects on their behalf (Alinaitwe et al., 2013). There are various procurement methods used in construction projects, however since no single method applies to every project, it is important to note which method applies to a project to have successful construction projects.

Existing research increasingly shows that effective procurement planning impacts project outcomes like cost, time, and quality. Studies in Uganda found that poor planning leads to budget deficits and weaker contract performance (Muhwezi et al., 2020), while factors like needs assessment and budgeting influence procurement success (Nuwagaba et al., 2021). However, these findings are mostly context-specific and not yet broadly generalizable.

Key gaps remain, particularly in understanding how planning elements affect outcomes through mediators such as communication or procurement methods, since most studies offer little understanding of how specific planning practices influence performance. There's also limited research across diverse regions in Uganda, with most studies to focusing on the local government and not the central business district. These limitations hinder the development of widely applicable best practices.

In this research, a study was done to find how procurement planning is carried out in Kampala today. An analysis was done to find the effect of procurement planning in procurement on construction project performance. This study also found the required procurement planning practices should be employed in construction projects to achieve positive project performance.

1.2 Problem Statement

The measure of construction project performance is based on time, cost and quality. Procurement planning establishes the construction project objectives, estimates required resources, and develop a procurement schedule to enhance efficiency in procurement activities. A planned construction project will result in success in terms of working within the budget, completion within the schedule and quality finished product, however, many projects show that this has not been the case (Omondi, 2013).

To improve the infrastructure of the country, the government of Uganda has used resources on construction projects. In the 2022-2023 national budget, a tune of 4.3 trillion Ugandan Shillings was allocated towards transport and infrastructure development (MOFPED, 2022). However, there have been issues with the procurement, accountability, scheduling conflicts, and budget overruns in construction projects in Uganda. (Nshemereirwe, 2015). Construction works for public facilities like health centres and roads are characterized by mismanagement of resources and shoddy work which not only affects the government but also the communities that need these services.

In Uganda, poor project planning has been a major contributor to the consistent underperformance of construction and infrastructure projects. According to the Office of the Auditor General, over 65% of public infrastructure projects were delayed, and more than 40% exceeded their budgets, largely due to inadequate planning (OAG, 2022). Key issues include unclear scope, weak risk assessment, limited stakeholder involvement, and poor procurement strategies. A 2021 UNABCEC survey found that over 50% of contractors linked inadequate project briefs and late design changes to costly variation orders (UNABCEC, 2021). Additionally, the PPDA's 2020 audit revealed that over 70%

of procurement plans lacked thorough needs assessments and market analysis (PPDA, 2020). The World Bank estimates that Uganda loses around USD 300 million annually due to such inefficiencies, which undermine public trust, delay service delivery, and threaten the achievement of Vision 2040 goals (World Bank, 2020).

Cost overrun is a challenge in construction because it substantially hurts the contractor's profit, resulting in huge losses and rendering the job very challenging (Vaardini et al., 2016). When projects go beyond the budget and schedule, it compromises client satisfaction. To curb these ever-persistent challenges in construction new methods of project management are used to have more successful projects. This research aimed to study the relationship seen between the procurement planning and construction project performance in Uganda.

1.3 Main Objective

To improve the effectiveness of the procurement planning to achieve construction project performance.

1.4 Specific Objectives

a) To investigate the present procurement planning activities followed in construction projects.

b) To assess the effect of procurement planning practices on project performance

c) To propose a suitable procurement planning framework to achieve positive project performance.

1.5 Research Questions

a) What procurement planning activities are being followed in construction projects today?

b) What is the effect of procurement planning on project performance?

c) What procurement planning practices should be employed to achieve positive project performance?

1.6 Justification

Many construction projects in Uganda frequently exceed their planned schedules and budgets, particularly when they involve complex scopes of work. In recent years, the Ugandan government has invested substantial resources in infrastructure development as part of its broader strategy to stimulate economic growth and improve service delivery. However, despite these investments, numerous public construction projects continue to face significant challenges, including cost overruns, time delays, and concerns over the quality of completed works. These issues pose a serious threat to the effectiveness and sustainability of infrastructure development efforts.

While several studies have examined the influence of procurement procedures—such as procurement methods, bid invitation techniques, and bid evaluation criteria—on project performance, fewer have explored the specific role of procurement planning in shaping outcomes related to cost, time, and quality. Procurement planning, which involves activities such as needs assessment, stakeholder involvement, budgeting, risk identification, and scheduling, is a critical yet under-researched phase that may significantly influence the overall success of a construction project.

This study seeks to fill that gap by investigating whether effective procurement planning contributes to reducing time delays, controlling cost overruns, and enhancing quality in public construction projects. By focusing on procurement planning as a strategic management tool, this research aims to provide evidence on its impact on project performance and offer practical insights for improving construction outcomes in Uganda's public sector.

1.7 Significance Of Study

The Ugandan government will find the results of this study to be a valuable resource, through the ministries of works and finance as well as the various city authorities, which are responsible for infrastructural development to design, control and improve systems and policies to achieve value for money and successful projects.

These research findings will also help PPDA to improve on the existing measures to address the challenges stemming from poor procurement management in construction projects in Uganda. Future researchers in a related field will also employ the findings as a stepping stone for continued research on the effect of procurement methods on construction project performance.

1.8 Scope

1.8.1 Geographical scope

The study focused on infrastructure construction operations in the Kampala area. Kampala is the capital city and the centre of business in Uganda. Increased economic growth and urbanization in developing countries have led to extensive construction activities in

Kampala City. (Muhwezi et al., 2012) Buildings are being constructed in Kampala for both commercial purposes and condominium residences.

1.8.2 Time Scope

This research was carried out between March 2023 and June 2024 in which data collection and analysis was done as well as report writing.

1.8.3 Content Scope

This research studied the current procurement planning activities being employed in today's construction industry. The study also determined the effect of procurement planning activities on construction project performance. The performance was quantified in terms of cost, time and quality of the work done. The result establishes the most suitable procurement planning framework for construction projects to achieve successful project completion.. In the research, questionnaires were used to gather information from clients, project managers and construction contractors. Information gathered entailed their experiences in carrying out construction projects.

1.9 Conceptual Framework

A conceptual framework serves the objective of illuminating the proposed relationship between the independent and dependent variables in a study. It explains the specific objectives of this research and how they merge to come up with coherent conclusions. (Swaen & George, 2022)

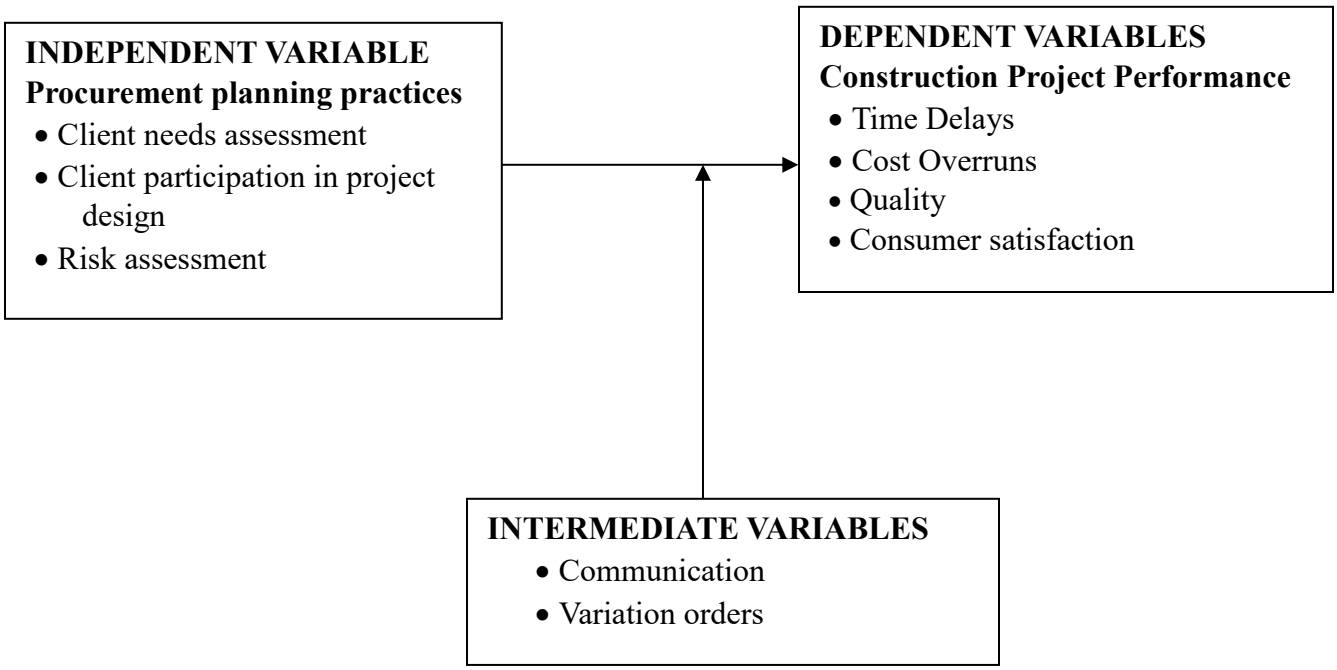

Figure 1.1: Conceptual framework

Effective procurement planning is widely recognized as a critical determinant of construction project success. In the context of construction management, procurement planning encompasses a range of early-stage activities that shape the trajectory of project execution. These include identifying client needs, involving stakeholders in design decisions, and assessing potential project risks (Olaniran, 2015). However, even with comprehensive planning, many projects still suffer from time delays, cost overruns, and compromised quality. This conceptual framework proposes that procurement planning practices influence project performance both directly and indirectly, through two key mediating variables: communication and variation orders.

Procurement planning practices refer to pre-construction activities designed to align project goals, available resources, and stakeholder expectations. This study examines three key dimensions of procurement planning: client needs assessment, which involves

systematically identifying and documenting client objectives, preferences, and functional requirements to ensure a clearly defined project scope and minimize future changes (Mills et al., 2009); client participation in project design, where active client involvement fosters mutual understanding, increases project ownership, and ensures better alignment between the design and client expectations (Chiniyo & Olomolaiye, 2009). Risk assessment, which entails identifying and evaluating potential risks that can be financial, technical, and environmental, to enable proactive mitigation and reduce disruptions during execution (Zwikael & Ahn, 2011). Together, these practices are expected to enhance construction project performance by ensuring greater clarity, alignment, and preparedness from the outset.

Construction project performance is commonly assessed through three key criteria: time performance, which evaluates adherence to the project schedule and the extent of delays; cost performance, which compares actual expenditures to the project budget; and quality performance, which measures how well the completed project meets established standards and client expectations. Research has consistently identified poor planning as a major factor contributing to performance deficiencies in construction projects (Sambasivan & Soon, 2007). Consequently, effective procurement planning is expected to enhance performance across these dimensions by promoting better scheduling, cost control, and quality outcomes.

Procurement planning directly influences project performance, but its effectiveness is often mediated by communication and variation orders. Effective communication among stakeholders enhances coordination, problem-solving, and alignment throughout the project, while poor communication can lead to delays and reduced productivity

(Loosemore & Al Muslamani, 1999). Similarly, variation orders—formal changes to the contract scope or design—commonly arise from inadequate planning or unclear requirements and are strongly associated with cost and time overruns (Hwang et al., 2014). Therefore, robust procurement planning that includes thorough risk assessment and stakeholder input can improve communication and reduce variation orders, ultimately enhancing overall project outcomes.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

A literature review is a concise review of the research about the topic being explored (Ndille, 2020). A literature review is a technique for locating, assessing, and interpreting a corpus of previously published material created by researchers, academics, and practitioners. (Fink, 2013). The chapter discusses the researched theories and reviews of the literature of other studies related to this research. Discussion of the literature is related to the objectives, related concepts, or other related studies within the same geographical scope. This chapter criticizes the strengths and weaknesses of the various studies while expressing the need for further research in this field of study.

2.2 Theoretical Review

Procurement planning is the main activity that lays the foundation for all subsequent procurement actions. It fuels and then ignites the engine powering the procurement process. (Basheka, 2008). It involves clearly identifying the goods, services, or works required, determining the appropriate time for acquisition and use, and selecting the sources from which they will be obtained. The process also includes establishing when the materials should be ready, deciding on the most suitable procurement methods, and identifying ways to improve efficiency and effectiveness. Additionally, it outlines the roles and responsibilities of the individuals and teams involved in the procurement process. (Okedi, 2010)

Project procurement as a structured process of acquiring a building product, such as a home, retail facility, road, or jetty (Rashid et al., 2006). Successful project outcomes are measured using the key parameters of time, cost, and quality. The study highlights that

different procurement systems, including the traditional system, design and build, and management contracting, influence project performance in distinct ways.

Project procurement systems are categorised into many forms based on the dependency and significant interaction between the responsibilities for design and construction (Mastermann, 1996). Separated and cooperative, integrated, and management-focused are the several classifications used to categorize procurement systems according to Rashid et al. (2006).

2.2.1 Procurement planning in Uganda

The Public Procurement and Disposal of Public Assets Act 1 of 2003 set up the Public Procurement and Disposal of Public Assets Authority (PPDA) as the principal regulatory body for public procurement and disposal of public assets in Uganda (PPDA., 2023). The PPDA Act of 2003 gives the Authority the responsibility of ensuring that unbiased, competitive, open, nondiscriminatory, and economical disposal rules are applied. To carry out this purpose, the authority, among other things, conducts procurement audits, investigations, and reviews.

Uganda's construction sector growth has been constrained by several issues that affect construction companies and other supply chain participants. The difficulty in obtaining financing, widespread corruption, and the lack of competition in public procurement are only a few of the issues. Others include building the capability of local firms, knowledge asymmetries about market prices, and the calibre of subcontractors. (Colonnelli & Ntungire, 2019). By enhancing openness and accountability in the procurement of

construction projects, the government would be better able to rectify the flaws that have been weakened by fraud in the public procurement.

Several studies have examined the impact of procurement planning on project performance within the public sector in Uganda, particularly at the local government level. Investigations on construction contracts in Ugandan District Local Governments showed a strong correlation between poor procurement planning and adverse financial and operational outcomes. Inadequate planning is associated with significant budget deficits, delayed fund disbursements, and generally poor project performance (Muhwezi et al., 2020). This suggests that procurement planning is a critical determinant of efficiency and effectiveness in local government construction projects.

In the context of national road infrastructure, the role of procurement management in the performance of road construction projects under the Uganda National Roads Authority (UNRA) was analysed. The study concluded that procurement management accounted for approximately 22.4% of the variance in project performance. However, procurement planning alone contributed only about 2.2%, indicating a relatively minor role compared to other dimensions such as procurement organization and control (Nakonde, 2012). This finding underscores the complexity of project performance determinants and suggests that while procurement planning matters, its isolated impact may be limited within larger institutional frameworks.

A study focused on procurement risk planning in Kampala's road construction projects responded to ongoing concerns regarding cost and time overruns as well as quality deficiencies in urban infrastructure development. Despite an increase in road construction

activity, many projects continue to face performance challenges, prompting exploration of risk planning as a potential solution (Byomugabe et al., 2024). Their findings highlight the need for a more proactive and systematic approach to risk management within procurement planning to enhance project outcomes in urban settings.

2.2.2 Effect of procurement planning on project performance

Research on procurement methods and their influence on project performance was carried out by Ghadamsi & Braimah (2000). The traditional techniques of procurement (design, bid, construct) as well as the design-and-build method were both examined in this study. A framework was created using the results of that study to specify the criteria for the selection of both procurement techniques. The most often referenced procurement selection criteria in the literature were found to be thirteen (13) of them. There are several of these, including price competition, price certainty, construction time, time certainty, quality level, coordination between design and construction, clear specification of the scope, flexibility in adjustments, complexity of the design, responsibility distribution, client engagement, and controllable variance (Ghadamsi & Braimah, 2000).

Eriksson & Westerberg (2012) argue that to ensure effective project governance in the construction industry, an all-encompassing strategy for procurement should not only focus on the various procurement alternatives in construction projects but also all other the procurement related factors. The factors associated with the procurement that Eriksson and Westerberg (2012) identified relate to features of the entire purchasing process, comprising the design phase, the request for bids, the bid evaluation, the choice of the subcontractor, the payment forms, and the performance assessment. Their study also

discussed the other project performance evaluation criteria, such as cost, schedule, quality, environmental impact, work environment, and innovation.

Jeotepkeny (2015), established the procurement plan aspects include definitions of specifications, bid invitation, evaluation and contract negotiation as the variables that influence project performance. Jeotepkeny (2015), argues that the determination of deliverables or milestones, which serve as a gauge of progress, will result from the specification of requirements. The choice of bid invitation also affects the project performance. Restricted bidding is used when the procurement's nature allows the business to specify the outcomes but not always how they will be delivered. Here, performance is the key factor and is readily comprehensible (Jeotepkeny, 2015). Bid evaluation is also a variable. The researcher supports (Eriksson & Westerberg, 2012) research that the ability to do the work, capacity, and cost should all be considered during the evaluation of the procurement.

The Ugandan government has invested a lot of money in construction projects over the past few years as part of its increase in fair access to secondary education and hospitals. Procurement management is simply procurement planning, contracting and control (Nshemereirwe, 2015).

Ogunsanmi (2013), categorized aspects relating to procurement into project performance, tendering procedures, and variation orders. The study confirms that the Nigerian construction sector frequently uses procurement techniques including traditional, design and build, project management, construction management, labor only, direct labor, and other types such as alliances, partnerships, and joint ventures. The performance of most

projects can be considerably impacted by the employment of various procurement techniques. Despite the use of the prominent methodologies of procurement, it is important to note that each method offers various aspects of procurement about their evaluation criteria, bidding processes and change orders (Ogunsanmi, 2013). Similar to Eriksson & Westerberg (2012), control of project design affects the project performance. Procurement methods such as design and build as well as build and management contracting have strength in design control.

A study on the effect of procurement procedures on project performance, classified the procurement process into design, invitation and evaluation of bids and performance regulation. Project design is a cruicial part of construction project planning. The research clearly stated that these procedures affect project performance depending on collaborative tools and climate (Omondi, 2013). The tools include joint objectives, team building activities, joint risk management among others.

In Mgawe & Masanja (2018), "What procurement methods in Tanzania are influencing the success of building projects" was the topic that the study set out to address. The goal of the study was to evaluate how Tanzanian building projects performed in relation to procurement practices. The procurement practices in the study covered contract monitoring, supplier selection, and procurement planning. The majority of building projects in Uganda have experienced issues with completion delays and cost overruns, which has raised serious concerns. (Alinaitwe et al., 2013). An improved understanding of procurement in construction and its impact on construction is essential to fostering growth (Mgawe & Masanja, 2018).

Dagba & Dagba (2019) evaluated contract management procedures and procurement techniques to see how they impact the success of road and building constructions in West Africa Ghana. A purchasing strategy consists of many steps. These steps are frequently progressive and interrelated. The success or failure of initiatives is greatly influenced by their efficacy and efficiency. Probity, accountability, and value for money should all be carefully considered when purchasing and tendering goods and services (Dagba & Dagba, 2019). The practice of retaining control over a contract's execution is known as "contract management," and it is done to make sure that the parties to the contract uphold all of their responsibilities, including but not limited to those to meet the contract's performance and quality standards. (Law Insider, 2022). The procurement cycle.

2.3 Overview Of Variables

2.3.1 Project Performance

The effects of planning, procedures or factors, and methods of procurement of construction projects on project performance have been the subject of numerous studies. Time, cost, and quality are the most typical metrics used to assess procurement performance. However, Ogunsami (2013) study shows that the selection is primarily judged based on cost, time and quality. Little attention is given to the specific characteristics of the project and the external environment. General requirements, the outside environment, and the nature of the project do not appear to have very significant effects on project performance. The criteria for evaluating project performance, according to Eriksson & Westerberg (2012), are economic performance, time performance, quality, environmental performance, work environment, and innovation.

Dagba & Dagba (2019) include safety and government value for money as a measure of project performance. It was also concluded by Omondi (2013), that the success of projects also depends on how contractors are paid. The motivation to carry out work, and complete projects on time is dependent on the timely pay of payment certificates.

2.3.2 Construction Procurement in Uganda

Procurement encompasses a comprehensive spectrum of tasks associated with acquiring goods, services, and projects. This can span from engaging in contracts for complete services to acquiring minor assets like office supplies (Barrett et al., 2011). The system of construction procurement typically involves a sophisticated web of relationships, comprising clients, consultants, and construction firms, working collaboratively to bring a building project to fruition (Clamp et al., 2012). The procurement process involves procurement planning, tendering, evaluation, contract award and contract management.

The structure of the procurement is condensed into three main stages: preparation or planning, procedure execution leading to contract award, and subsequent contract implementation accompanied by performance monitoring. (Preda, 2019)

Initially, in the preparation or planning stage, the focus lies on identifying the necessity for procurement, delineating requirements, and establishing clear procurement objectives. This phase involves conducting thorough market research, evaluating potential risks, assessing budgetary constraints, and formulating effective procurement strategies. It is during this phase that specifications and criteria are delineated to provide guidance throughout the procurement of construction projects.

Subsequently, the execution of the procurement procedure and the subsequent awarding of the contract mark the second stage. This phase entails the practical implementation of the procurement plan, which includes soliciting bids or proposals from potential suppliers, evaluating submitted offers, negotiating terms, and ultimately selecting the most suitable supplier based on predefined criteria and requirements.

Finally, the third stage centers on the implementation of the awarded contract and the ongoing monitoring of its performance. Here, the emphasis shifts to fulfilling contractual obligations, overseeing the execution of projects or services, managing supplier relationships, and ensuring strict adherence to the terms and conditions outlined in the contract. Concurrently, performance monitoring activities involve the continuous tracking of key performance indicators, evaluating supplier performance, addressing any emerging issues or disputes, and making necessary adjustments to optimize outcomes throughout the contract duration.

2.3.3 Procurement Planning

Preda (2019) implied that procurement planning is the first stage of the procurement process. Planning is the main activity that lays the foundation for subsequent procurement actions. (Basheka, 2008). Forecasting, a work plan, and a procurement over view all reflect procurement planning. A request for proposals and the preparation of a work statement are all part of contracting, whereas risk assessment is part of procurement control. According to this study, utilizing the bid amount to assess contractors throughout project procurement might lead to talks so that preferred contractors can be accommodated within the budgetary constraints. Due to implementation issues, some contractors fail to complete projects as a result of underquoting. (Nshemereirwe, 2015).

Procurement methods and strategies are also discussed to determine the most suitable one for the project. The most common procurement method is open tendering, which involves publicly inviting bids to promote transparency and competition. Additionally, restricted tendering is another method that limits participation to pre-qualified suppliers. Organizations may use request for quotations (RFQ) to quickly obtain prices from a few suppliers for smaller or routine purchases. Procurement planning involves the systematic identification, analysis, and preparation of activities necessary for acquiring resources essential for a construction project. It establishes a framework for obtaining materials, services, and labor, impacting project cost, duration, and quality (Smith & Merna, 2013). According to Smith and Merna (2013), effective procurement planning contributes to minimizing risks, optimizing costs, and ensuring timely resource availability. The figure below shows the procurement cycle.

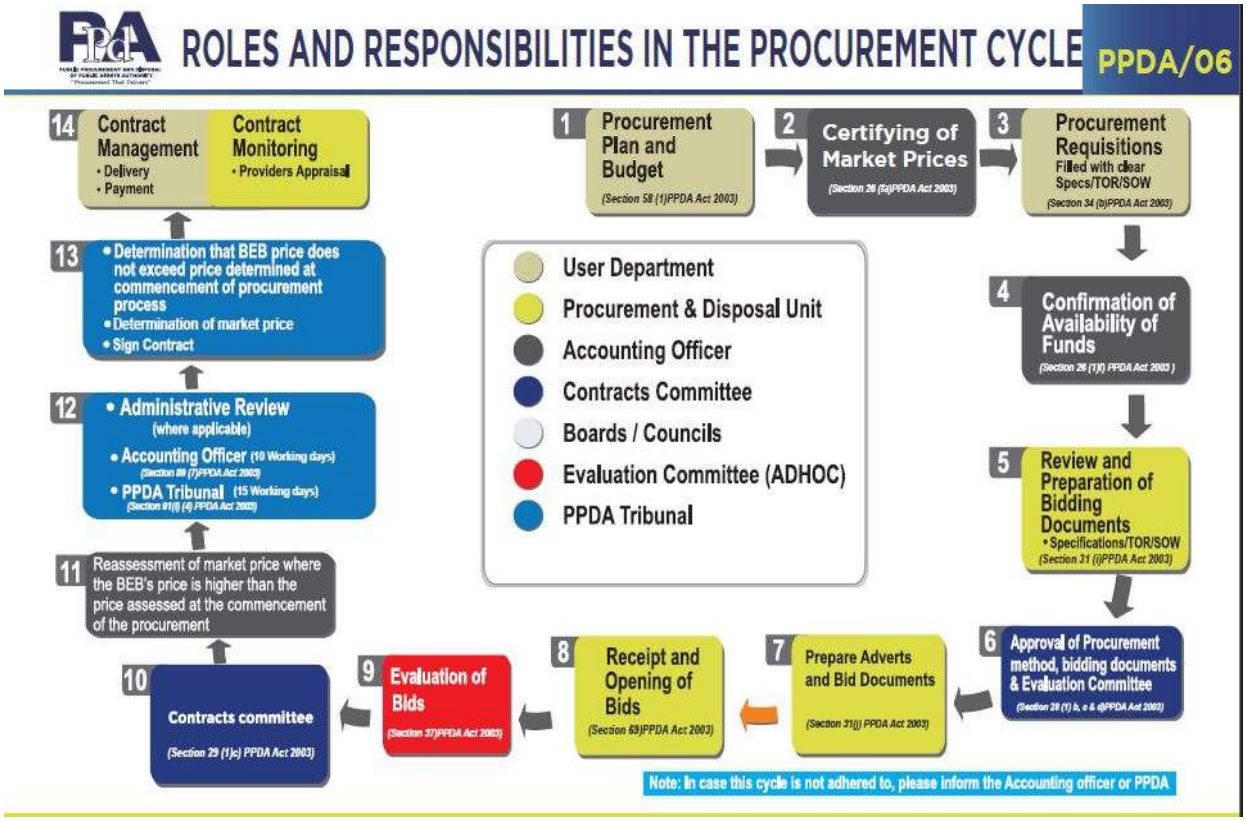

Figure 2.1: The procurement cycle (PPDA., 2023).

Construction procurement planning is a critical step in project management, influencing the overall success of construction endeavours. Efficient procurement planning is essential for achieving project objectives in terms of cost, time, and quality. This literature review explores the role of construction procurement planning and its impact on project performance, emphasizing challenges in project design and client involvement that contribute to cost and time overruns and lower customer satisfaction.

Factors affecting procurement planning include assessment of the clients' requirements, project design, availability and cost of materials, planning contingencies, project schedule and having a procurement monitoring plan. Procurement planning is influenced by a combination of internal organizational factors and external market conditions. Internally, an organization's budget, goals, and project timelines play a crucial role in shaping procurement strategies. A limited budget requires cost-effective planning, while strict project deadlines demand timely procurement of goods and services to avoid delays (PMI, 2017). Additionally, internal procurement policies and procedures guide how purchasing is conducted, ensuring consistency, transparency, and alignment with organizational values (Thai, 2009). Legal and regulatory compliance is also essential, as organizations must adhere to procurement laws and standards that govern sourcing practices (Arrowsmith, 2010).

Externally, market dynamics such as supplier availability, competition, and pricing trends significantly affect procurement decisions. In unstable markets, procurement plans must address potential risks like price volatility or supply chain disruptions (Kerzner, 2013). Effective risk management strategies, including supplier diversification and contingency planning, help mitigate these issues. Furthermore, the adoption of procurement

technologies and information systems enhances decision-making by improving forecasting, tracking, and overall procurement efficiency (Laudon & Laudon, 2020). Overall, successful procurement planning requires a strategic balance between internal priorities and external influences.

In 2012 a study by Eriksson and Westerberg, suggest that collaborative procurement practices have a favorable impact on project outcomes. The use of collaborative tools and the project's collaborative environment are thought to have a moderating effect on the influence on project outcome. Research indicates that project design decisions, as part of procurement planning, play a crucial role in overall project outcomes. These decisions significantly affect life cycle costs, influencing long-term value and sustainability. They also have a direct impact on initial construction costs. Moreover, effective design choices contribute to better compliance with project schedules. Coordination between the architects and the contractors is necessary to limit the likelihood of incorrect designs. (Turner et al., 2014)

Project design is a pivotal phase influenced by procurement planning, encompassing architectural and structural aspects. Challenges in this phase can lead to deviations from the initial project plan. For instance, Turner et al. (2014) note that inadequate design details may result in variations during construction, causing cost overruns. The lack of comprehensive geological studies and material assessments during project design may lead to unforeseen issues, contributing to delays and increased costs (Chan et al., 2017)

Client involvement is crucial for aligning project goals with expectations. Effective collaboration with clients during the design phase ensures that the project meets their

vision and requirements. However, limited client involvement can lead to misunderstandings and changes during construction, impacting project timelines and costs (Adul- Rahman et al., 2016). According to (Hughes & Greenwood, 2017), clients should actively participate in architectural design, material selection, and scheduling to avoid decision-making delays during construction.

Insufficient procurement planning, especially in project design and client engagement, leads to time and cost overruns. (Turner & Zolin, 2012) emphasize that deviations arising from design alterations, material availability challenges, and client-initiated changes cause delays and escalate project expenses. Incomplete client participation during procurement planning frequently prompts expensive adjustments and prolonged project durations (Chan & Kumaraswamy, 2017).

Descriptive research was used in the paper by (Jeotepkeny, 2015) and according to the research, specification definition in project planning is positively and significantly correlated to project performance with a 29.4% contribution. It was concluded in the research that putting all the focus on bid amount during procurement without putting into consideration other procurement factors like specifications and evaluation criteria will result in poor project performance.

Both the workers of National Housing Construction company limited and the occupants of the National Housing Flat accommodations completed questionnaires as part of Okedi's (2010) study on the impact of procurement planning on project performance. The findings indicated a high correlation between a change in procurement strategy and a major improvement in the performance of building projects. The association coefficient's

positive nature suggested that better procurement planning is associated with better construction project performance. Similarly, Mgawe & Masanja (2018) found that procurement planning had a positive correlation coefficient association with project performance.

Using indicators such as life cycle cost, complexity, cost and schedule of a project, it was established that 30% of cost and time overruns are caused by defective project design (Omondi, 2013). A design that can be built would undoubtedly result in time, cost, and change costs being reduced. But despite its significance, there hasn't been much progress made to address the buildability issue, in part because of antagonistic behaviours among the client, contractors, and consultants under the conventional procurement model (Naoum & Egbu, 2015).

According to descriptive research, (Jeotepkeny, 2015), bid invitation efforts and the success of construction projects are positively associated, with the result that bid invitation is responsible for 6.66% of the change in project success. According to their research, bid evaluation contributes 58.5% to performance and also has a positive relationship. The study concluded that poor project performance would come from focusing just on bid amount during procurement without taking into account other procurement aspects like experience and technical specifications evaluation criteria.

Project performance is also impacted by the tendering procedures. Project success is significantly impacted by several tendering techniques, including selective tendering, open tendering, and negotiated tendering. The success of the majority of projects in Nigeria's construction industry has been impacted by the employment of competitive,

selective, open, and negotiated tendering procedures (Ogunsanmi, 2013). In conclusion, the study showed that the performance of construction projects is influenced by the choice of procurement technique, tendering methods, and variation methods. The performance of a project may be impacted by how it is tendered.

According to a study done by Omondi (2013), there is a strong likelihood that projects given to businesses with fewer than five years of building expertise will take longer than anticipated and cost more overall. The other crucial point that became evident was the significance of each factor, including bid pricing, managerial competency, prior experience, reference items, environmental QMS, financial stability, and collaboration skills, when choosing bidders or contractors. On the other hand, Mgawe & Masanja (2018) discovered that there is little connection between project performance and supplier choice. Emphasizing contract monitoring and control throughout project implementation is equally crucial since it sparks a search for solutions to the problems that have been recognized as dangers to the project's performance.

2.4 Summary

Recent research increasingly shows that effective procurement planning plays a vital role in achieving successful project outcomes—especially in managing costs, meeting deadlines, and maintaining quality. Studies show that weak procurement planning in Ugandan local governments often leads to budget overruns and poor contract performance (Muhwezi et al., 2020). Other studies also found that factors such as proper needs assessment, budgeting, and information sharing can improve procurement performance (Nuwagaba et al., 2021).

While these studies offer useful insights, they tend to focus on specific local contexts, limiting their broader applicability. Much of the research is concentrated in Uganda and similar settings, which raises questions about how relevant the findings are in other regions or sectors. As a result, the ability to develop standardized best practices in procurement planning remains limited.

Moreover, current research often relies on cross-sectional or correlational methods, which observe associations rather than explain cause-and-effect relationships. This means there's still little understanding of how planning elements—like stakeholder engagement or risk analysis—impact performance through factors such as communication quality or contractor capacity. Additionally, the lack of cross-regional or international studies makes it difficult to identify which strategies are effective universally versus those that are context-specific. Addressing these gaps with broader, more rigorous studies could help create more practical and generalizable procurement planning guidelines.The various studies have shown that the major parameters for determining project performance include time, cost and quality considerations.

This study first determined what procurement planning activities are currently being followed in the construction projects around Kampala. The procurement of a construction project begins from procurement planning, up until the retention and defects liability period is completed. Research studies have shown that bid evaluation mainly checks for budget and work experience. This study focused on how other evaluation criteria affect project performance namely; technical proposals like method statements and work programs and financial capability.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter entails the methods employed to conduct this research. This section will discuss in detail, the research design, research approach, sampling methods, study area, methods for data collection and data analysis are discussed.

3.2 Research Design

This is a broad plan of action selected to rationally combine the study's specifics to successfully address the research topic. It serves as the guideline for the gathering, measuring, and analysis of information. In this study, a descriptive survey research design was employed. Information from a population's members was gathered through descriptive research to determine the population's present position regarding one or more aspects (Mugenda & Mugenda, 2003).

A survey design is a research strategy in which the researcher seeks to collect data from members of a population to determine the population's present condition concerning one or more variables. (Adeyemi & Adu, 2010). Therefore, this research described how the independent variable of procurement planning correlates to the characteristics of project performance, that is, time, cost, quality and customer satisfaction.

3.3 Research Approach

The research included qualitative and quantitative approaches. The quantitative approach was employed for sampling, data collection and analysis. A qualitative research approach was employed to gather deeper information to determine relationships between the variables.

3.4 Study Population

A population, in a study by Mugenda & Mugenda (2003), is a group of people, objects, or things that a study is interested in and that share some form of observable trait. This research is centred on infrastructural projects around Kampala and major road networks. Therefore, the research was carried out on 45 individuals of which 10 are clients, 24 are employees or employers of a construction contracting firm and 11 are staff of an architect and project managing firm as illustrated in Table 3.1 below. The classes of companies considered were class A and B companies as per UNABSEC directory. The companies are classified based on financial capacity, technical capacity (equipment, personnel) work experience and organizational structure. Information was additionally gathered from three finalized construction projects to facilitate a comparison between the factual data and the perceptions articulated by the survey participants.

Table 3.1: Study Population and Sample Size Selection

S/No.	Category	Population	Sample	Method
1	Clients	15	10	Purposive
2	Project Managers	15	11	Purposive
3	Contractors	30	24	Purposive
4	Completed construction projects	5	3	Purposive
	TOTALS	**65**	**48**	

3.5 Sampling Technique

Purposive sampling, also known as judgmental and selective sampling was used. This sampling technique entails carefully choosing which participants will be examined for the study. A variety of non-probability sampling strategies are called purposeful sampling methods (Omondi, 2013). The aim is to focus on specific traits of a group of interest that

will assist in achieving the study objectives. The choice of sampling involved individuals who demonstrate experience in this specific study area. In this study, the sample included individuals who have procured for a construction project, construction companies that have participated in the bidding process, as well as the project managers and staff that carried out the evaluation on behalf of a client.

3.6 Data Collection

A questionnaire was used as the primary tool for collecting the data. A questionnaire is a tool used to collect data that explicitly lays out the questions intended to elicit the necessary information (Mugenda & Mugenda, 2003). A questionnaire is efficient and can help gather a lot of data from many people in a short amount of time.

To address the research questions structured questions were employed. The questionnaire was the recommended instrument because it works well, is inexpensive, and is simple to use. The desired respondents received the questionnaires either personally or through email. An introduction letter outlining the goals and significance of the study was given before the questionnaires.

The qualitative research in this study made use of a rating scale. Rating is a tool used to show judgment or personal thoughts about a scenario, item or character. Rating processes are techniques for quantifying such judgments since opinions are typically expressed on a scale of values (Pandey & Pandey, 2015). To gauge performance based on the opinions of the respondents, the Likert scale will be included in the questionnaire. The Likert scale displayed statements in descending order from strongly agree to strongly disagree on a 5-point scale.

Documentation is crucial because it gives the required context and background, making it a more valuable and organized undertaking (Nshemereirwe, 2015). Secondary information was obtained from published or unpublished reports, manuals and any other procurement documentation that was given without compromising confidentiality.

3.7 Ethical consideration

Ethical considerations were adhered to throughout the research process to ensure the rights, safety, and dignity of all participants were protected. Prior to data collection an introductory letter from the directorate of research was obtained from the university. The purpose of the study was clearly explained to all participants, and informed consent was sought, obtained and participation was entirely voluntary.

Confidentiality and anonymity were maintained by ensuring that no personally identifying information was collected. All responses were treated with strict confidentiality and used solely for academic purposes.

Given the professional nature of the target population the questionnaire was designed to avoid sensitive or intrusive questions. The research posed no physical or psychological risk to participants and all findings have been reported honestly and without bias.

3.8 Current procurement procurement planning activities in construction projects

Data was collected from clients with ongoing projects or projects that have recently been completed. Questionnaires were used to obtain information on whether the quality of work was achieved within the suitable time and budget. Project managers also provided information on the procurement planning activities followed in the procurement of

construction projects. The information gathered was used to find the relationships between the procurement planning activities and project success.

3.9 Procurement planning

Clients and project managers, using questionnaires, provided data on the activities done during procurement planning and how the projects performed. Information demonstrating the connection between project design and construction project performance was provided by the contractors who completed projects using both the traditional procurement technique and design and build.

The sample population provided information on whether forecasting was done, risk assessment before and during the project and how this affects the project performance.

3.10 Suitable procurement planning framework to achieve positive project performance

The data analysed from the procurement practices carried out in Uganda and the effect of procurement planning pracices on project performance, provided information to determine the suitable procurement planning framework to achieve project performance. The study also determined if all the procurement planning activities are suitable for the different procurement methods. The study found that client needs assessment, client participation in project design, material assessment are critical and necessary for construction project performance.

3.11 Data Analysis

Finding the relationships and correlations between the variables is the aim of this study. A wide variety of quantitative and qualitative activities are included in data analysis. It is

standard practice to critically focus on quantitative analysis alongside statistical approaches in behavioural research (Pandey & Pandey, 2015). Statistical methods and techniques are important in research because they provide answers to the problems.

For this study, a descriptive analysis was employed using measures of relationship or correlation. This was employed to see the connection shared among the independent variables and construction project performance.

Utilizing the Statistical Package for Social Scientists, data was sorted (SPSS). Descriptive statistics were used in the analysis. Frequency tables, mean, and standard deviation were all used in the descriptive statistics. Regression analysis and the Pearson correlation coefficient were used in the statistics to analyze the data. The relationship between the highest education level and work experience of participants and their responses to construction project variables was examined. The analysis focused to understand whether there are significant differences in the responses based on different education levels. The goal was to gain insights into how education level might influence participants' perceptions of various aspects related to construction project procurement planning. For this research, 0.05 will be used as the level of significance. Additionally, a comparision between the perceiptions of the respondents and the actual data collected from completed projects was made.

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1 Introduction

This chapter of the research dissertation will in detail show the presentation, analysis and discussions of the findings of the study. The responses from the study population were entered into the SPSS program for analysis. Relationship tests were carried out to assess the effect of planning in procurement on construction project performance.

Procurement planning in the context of construction projects refers to the systematic process of identifying, strategizing, and organizing the acquisition of goods, services, or works needed for the successful execution of a construction project. It involves making informed decisions about how and when to acquire resources, materials, equipment, and services while considering factors such as cost, quality, timing, and risk. Procurement planning aims to ensure that the necessary resources are available at the right time and in the right quantities to support the project's objectives.

4.2 Characteristics of respondents

Questionnaires were distributed to selected respondents for this study. The table 4.1 below shows the response rate.

Table 4. 1: Response rate

Questionnaires sent out	Questionnaires returned	Response rate (%)
60	45	75%

The study achieved a 75% response rate and several factors may have contributed to the 25% non-response. These include the busy schedules of professionals in the construction sector, who may have had limited time to complete the questionnaire. Additionally, some

potential respondents may not have perceived the topic of procurement planning as directly relevant to their immediate roles, leading to reduced motivation to participate. Nonetheless, the 75% response rate is sufficient to draw reliable conclusions and reflects a strong level of engagement from the targeted population. From the respondents, some of the data that was collected was around the type of company that one works in, the level of education, position held in the organization and also the level of experience.

4.2.1 Education level of respondents

Under this category, we had 76% of the respondents having bachelor's degrees as their highest level of education as illustrated in Figure 4.1. 11% of the respondents have a master's degree and 7% have a diploma as the highest level of education. 7% of the respondents have either higher diplomas, postgraduate diplomas or have taken professional courses like CIPS, and project management.

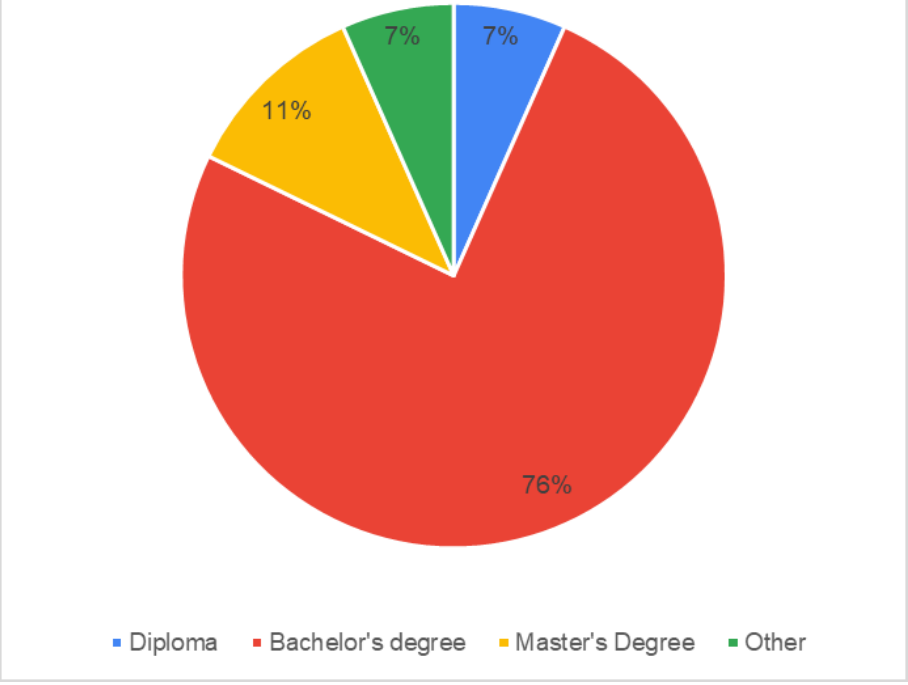

Figure 4.1: Education level of respondents

4.2.2 Type of company

This category shows that 53% of the respondents work as construction contractors, 24% work as construction consultants and project managers and 22% are construction clients. This shows that the biggest part of the construction industry is contractors as illustrated in Figure 4.2. below.

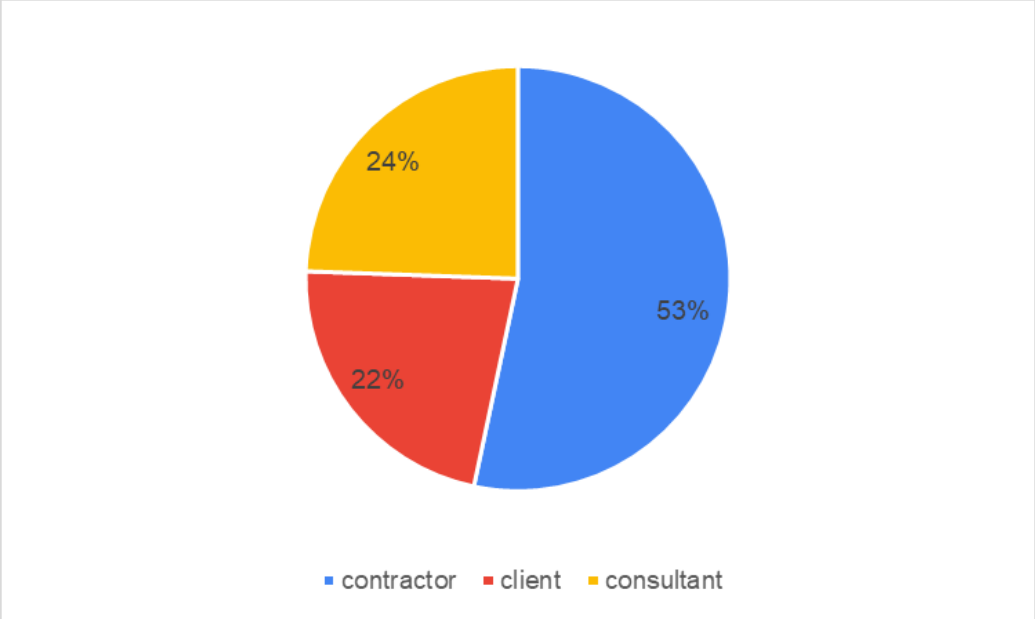

Figure 4.2: Type of Company of Respondents

Nature of work of respondents

The biggest percentage of these repondents, 56%, are in construction and technical works related departments. 16% of the respondents have design as their nature of work while 13% are quantity surveyors. 15% of the repondents are distributed among procurement, administration and project management as shown in the figure below.

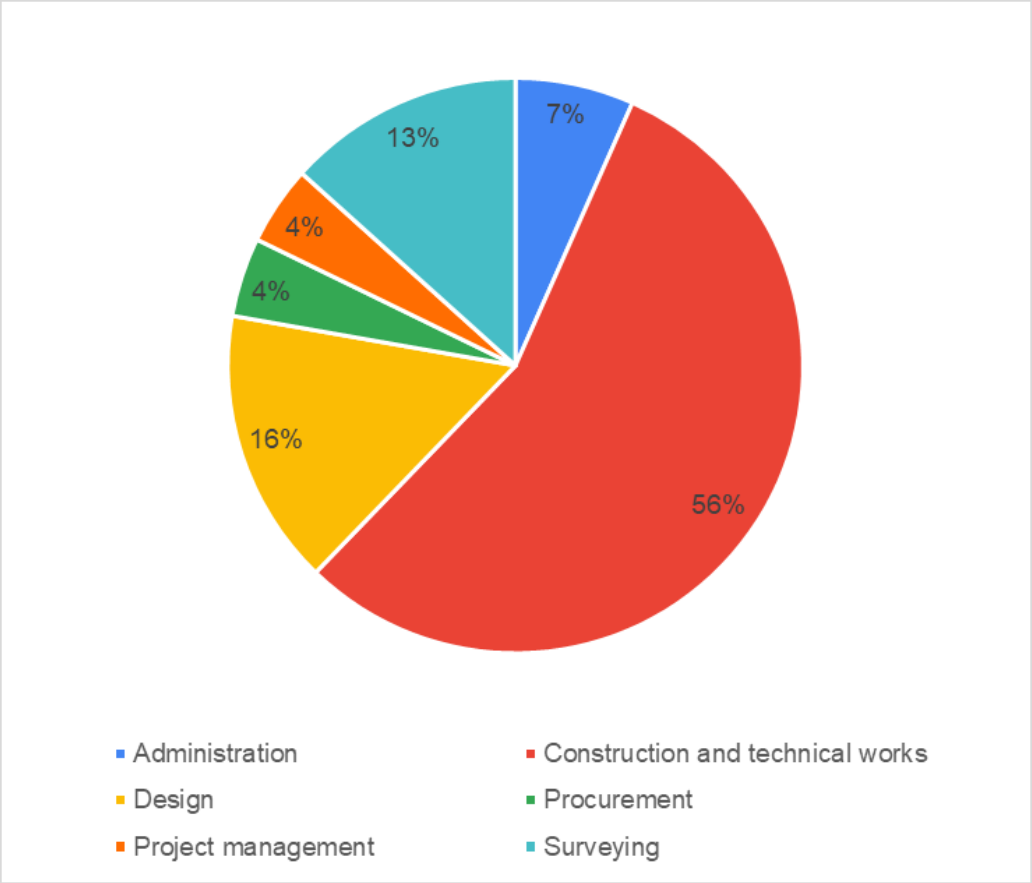

Figure 4.3: Nature of work of respondents

4.2.3 Experience of the respondents

Of the individuals whose data was collected, the highest composition had them being those that had less than 5 years of experience. Having a substantial number of individuals with less than five years of experience injects fresh perspectives, innovative ideas, and dynamic energy into the workplace. These newcomers often bring a willingness to embrace modern technologies, adapt to evolving industry trends, and challenge traditional approaches. Their enthusiasm and eagerness to learn can foster a collaborative environment, bridging the gap between seasoned professionals and new talents. Furthermore, a workforce with a mix of experience levels promotes a knowledge-sharing culture, where veterans can mentor and guide those with less experience, creating a symbiotic relationship that propels

the entire team forward. Embracing a diverse range of experience levels not only invigorates the construction industry but also ensures its resilience and adaptability in the face of changing demands and advancements.

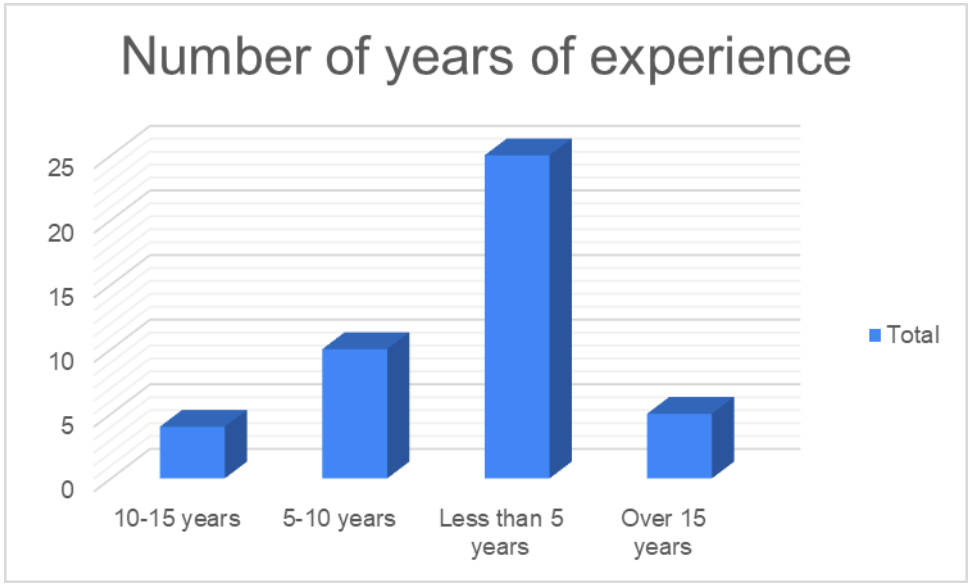

Figure 4.4: Years of experience of the respondents

4.3 Analysis of the qualitative statements

The analysis of the qualitative parameters was done using the mean values. The following key was used to determine to what extent the respondents agreed with the statements concerning procurement management.

1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree

4.3.1 Procurement planning practices carried out in Uganda today

Table 4. 2: The current procurement practices carried out in Uganda today

S.No	Procurement Practice	Average rating
1	Client needs assessment is made at the planning stage	4.02
2	Assessment of market prices for materials is made at the planning stage	3.82
3	Market prices of materials affects the project design	4.09
4	Project design affects the Bills of Quantities, project schedule and specifications	4.39
5	Designs, specifications, construction schedule and Bills of quantities are prepared with client participation	2.66
6	Designs, specifications, construction schedule and Bills of quantities are prepared before invitation to bidders.	2.57
7	The designs are made by competent staff with utmost accuracy	3.95
8	Criteria for selection of contractor is made before bidding process begins	4.07
9	Procurement schedules and budgets are followed with no overlaps.	2.11
10	The designs made at planning stage are followed throughout the construction.	2.09
11	Construction projects are completed within the budget.	1.75
12	Risk assessment and mitigation plans are followed throughout the project construction	1.89

Interpretation of results

<u>High rating (close to 4)</u>

The following statements had a rating close to 4 according to the responses from the sample group. The respondents generally agree that these procurement practices have been carried out in the most recent construction projects that they are involved in.

Client-needs assessment made at the planning stage, the assessment of market prices for materials made at the planning stage, the effect of market prices of materials on the project

design, project design effect on the Bills of Quantities, project schedule and specifications, the designs are made accurately by competent staff and the criteria for the selection of contractors are made before the bidding process begins

The commendable high ratings received for various procurement practices underscore the industry's commitment to efficiency and meticulous planning in recent construction projects. The recognition of client-needs assessment at the planning stage highlights a proactive approach to understanding and addressing client requirements from the project's inception.

Similarly, the emphasis on assessing market prices for materials during the planning phase showcases a strategic consideration for cost factors, contributing to informed decision-making. Notably, the acknowledgement that market prices of materials influence project design demonstrates a nuanced understanding of the interconnectedness between cost considerations and design elements.

The study continues with the realization that project design intricately impacts Bills of Quantities, project schedules, and specifications, indicating a holistic approach to project planning and execution. Moreover, the affirmation that designs are crafted by competent staff with precision reinforces the importance placed on accuracy and expertise.

Lastly, the establishment of criteria for the selection of contractors before the bidding process reflects a commitment to transparency and fairness in procurement, promoting a robust and competitive environment. These positive responses collectively signify a conscientious and well-structured approach to procurement practices, ultimately contributing to the success and quality of recent construction projects

Average rating (close to 3)

The following statements had a rating close to 3 according to the responses from the sample group. The respondents imply that these procurement practices are occasionally carried out in the most recent construction projects that they are involved in. Designs, specifications, construction schedules and Bills of quantities are prepared with client participation and are prepared before invitation to bidders.

The moderate average rating of close to 3 for certain procurement practices suggests that these aspects are implemented sporadically or inconsistently in recent construction projects, according to the responses from the sample group. Regarding the statement that designs, specifications, construction schedules, and Bills of Quantities are prepared with client participation, the average rating may indicate that client involvement in these crucial aspects is not consistently prioritized across all projects. While client participation is crucial for aligning the project with their needs and expectations, it appears that this collaborative approach might not be universally adopted, leading to varying levels of success in integrating client input.

Similarly, the statement about preparing designs, specifications, construction schedules, and Bills of Quantities before inviting bidders may suggest that, on occasion, projects initiate the bidding process without having all these essential elements finalized. This approach might lead to challenges in accurately communicating project requirements to potential bidders, potentially impacting the quality and competitiveness of bids received. The moderate rating implies that this practice is not consistently adhered to, and there may be instances where projects proceed with the bidding process while key details are still in flux.

These moderate ratings suggest that there is room for improvement in consistently implementing these procurement practices across construction projects, emphasizing the need for greater standardization and adherence to best practices for more reliable project outcomes

Low rating (close to 2)

The following statements had a rating close to 2 according to the responses from the sample group. The respondents generally disagree that these practices are carried out in the most recent construction projects they are involved in.

Procurement schedules and budgets are followed with no overlaps, the designs made at the planning stage are followed throughout the construction, construction projects are completed within the budget and risk assessment and mitigation plans are followed throughout the project construction

The notably low ratings close to 2 for specific procurement practices within the sample group's responses indicate a consensus that these practices are infrequently implemented or adhered to in recent construction projects. Firstly, the low rating for "Procurement schedules and budgets are followed with no overlaps" suggests that there is often a disconnect between planned schedules and budgets and the actual execution of projects. Overlaps in procurement schedules and budgets can lead to inefficiencies, delays, and unexpected financial challenges, highlighting a potential need for improved project management and coordination.

Secondly, the disagreement regarding whether "The designs made at the planning stage are followed throughout the construction" implies that, in many instances, project designs

undergo modifications or deviations during construction. This lack of adherence to initial designs may result from evolving project requirements, unforeseen challenges, or changes in stakeholder preferences. It underscores a potential gap in maintaining design integrity throughout the construction process.

Thirdly, the low rating regarding "Construction projects are completed within the budget" suggests that there is often a struggle to meet budgetary targets in recent construction projects. Budget overruns can occur due to various factors such as unforeseen expenses, scope changes, or inadequate initial budgeting. This emphasizes the importance of rigorous financial planning and control measures to ensure projects stay within budget constraints.

Lastly, the disagreement concerning "Risk assessment and mitigation plans are followed throughout the project construction" indicates that, in practice, risk assessment and mitigation plans are not consistently adhered to. This may stem from a variety of reasons, including a lack of proactive risk management, insufficient attention to identified risks, or challenges in executing planned mitigation strategies.

These low ratings collectively signal areas for improvement in project planning, execution, and risk management within the construction industry, emphasizing the need for more effective implementation of established practices to enhance project outcomes.

4.3.2 Factors of procurement planning affecting construction project performance

Table 4. 3:The average rating for project procurement planning practices to achieve maximum project performance.

Sno	Procurement practice	Average rating
1.	[Assessment of the clients' requirements]	4.11
2.	[Project design is made with client participation]	4.14
3.	[Project design is influenced by the availability of materials]	4.23
4.	[Material assessment should be done to determine the quality of materials, the cost of materials, and means of transportation to the site]	4.34
5.	[Performing risk assessment before bid invitation and planning contingencies.]	3.43
6.	[Project design influences the project schedule]	4.25
7.	[The quality of the finished product is affected by the project schedule]	2.48
8.	[Procurement monitoring plan by the consultants affects the performance of the contractors]	3.34
9.	[Technical requirement and experience are the most important factors in bid evaluation]	4.11
10.	[Tender amount is the most important factor in bid evaluation]	2.20

Interpretation of results

<u>High rating (close to 4)</u>

Higher average ratings (closer to 5) for statements below indicate that respondents generally agree that these factors influence whether a construction project will be completed within the project duration, budget, and desired quality.

These include, assessment of the clients' requirements, Project design is made with client participation, project design is influenced by the availability of materials, material

assessment should be done to determine the quality of materials, the cost of materials, and means of transportation to the site. The respondents also found that project design influences the project schedule and technical requirement and experience are the most important factors in bid evaluation

The consistently higher average ratings, closer to 5, for the specified statements suggest a strong consensus among respondents that these factors significantly influence the successful completion of construction projects within the desired parameters of duration, budget, and quality.

Firstly, the agreement on the importance of "Assessment of the clients' requirements" indicates a recognition that aligning project goals with client expectations is crucial for overall project success. Understanding and meeting clients' needs from the outset lay the foundation for a project's ultimate success.

Secondly, the acknowledgement that "Project design is made with client participation" reinforces the idea that involving clients in the design process contributes to project success. This collaborative approach ensures that the design reflects the client's vision and requirements, fostering a sense of ownership and satisfaction throughout the project.

Thirdly, the consensus that "Project design is influenced by the availability of materials" recognizes the practical impact of material availability on design decisions. Considering material availability during the design phase helps mitigate potential delays and challenges related to sourcing materials during construction.

Additionally, the agreement on the importance of "Material assessment" underscores the understanding that evaluating the quality, cost, and transportation logistics of materials is

critical. A thorough material assessment contributes to informed decision-making, ensuring the use of high-quality materials within budget constraints and efficient transportation to the construction site.

Moreover, the acknowledgement that "Project design influences the project schedule" highlights the interconnectedness of design decisions and project timelines. A well-thought-out design can positively impact project efficiency and adherence to schedules.

Lastly, the consensus that "Technical requirements and experience are the most important factors in bid evaluation" reflects the importance of competence and expertise in selecting contractors. Prioritizing technical requirements and experience in bid evaluation contributes to the likelihood of successful project execution.

In summary, these higher average ratings collectively emphasize the importance of client collaboration, material considerations, and technical expertise in influencing the positive outcomes of construction projects, aligning well with the industry's best practices.

Average rating (close to 3)

The following statements had a rating close to 3 according to the responses from the sample group. The respondents imply that these procurement practices although necessary, do not guarantee that the project will be completed within, budget, schedule and desired quality. They include performing risk assessment before bid invitation and planning contingencies. As well as having a procurement monitoring plan by the consultants affects the performance of the contractors

Firstly, the rating for "Performing risk assessment before bid invitation and planning contingencies" indicates an acknowledgement that conducting risk assessments and

planning contingencies are crucial steps in project management. However, the moderate rating suggests that respondents believe that, although necessary, these practices may not provide a guarantee against unforeseen challenges or variations during project execution. Risks may evolve throughout a project, and despite proactive planning, some uncertainties might still impact the project's outcomes.

Secondly, the rating for "Procurement monitoring plan by the consultants affects the performance of the contractors" suggests that while the implementation of a procurement monitoring plan is recognized as necessary, it is not seen as a standalone factor ensuring project success. The moderate rating implies that other variables, such as contractor capabilities, project complexity, and external factors, also play significant roles in determining project performance. The effectiveness of a monitoring plan may be influenced by various factors beyond its implementation, leading to a more nuanced perspective among respondents.

These moderate ratings collectively reflect a realistic understanding among respondents that certain procurement practices, while essential components of project management, must be complemented by a holistic approach that considers the dynamic nature of construction projects. Successful project outcomes often hinge on a combination of factors, including ongoing risk management, effective communication, and adaptability to changing project conditions.

Low rating (close to 2)

The following statements had a rating close to 2 according to the responses from the sample group. The respondents generally disagree that these practices highly influence a

construction project being completed in without cost and time overruns and with desired quality. These include the quality of the finished product is affected by the project schedule and the tender amount is the most important factor in bid evaluation

The disagreement regarding "The quality of the finished product is affected by the project schedule" suggests that respondents do not strongly believe in a direct correlation between the project schedule and the final quality of the construction product. This viewpoint might stem from the understanding that while schedules are essential for timely completion, the quality is primarily influenced by other factors such as construction methodologies, materials used, and workmanship standards.

Secondly, the disagreement on "Tender amount is the most important factor in bid evaluation" indicates that respondents do not perceive the tender amount as the sole or primary determinant of a successful bid. This perspective suggests that other factors, such as technical competence, experience, and adherence to project requirements, are considered equally or more important in bid evaluations. Focusing solely on the tender amount may not align with a comprehensive assessment of a contractor's ability to deliver quality outcomes within the specified parameters.

These low ratings collectively convey a viewpoint among respondents that successful project outcomes are influenced by a multifaceted interplay of factors, and the specific practices mentioned may not be seen as singularly decisive in ensuring projects are completed without cost and time overruns and with the desired quality. It emphasizes the need for a holistic approach to project management, considering various aspects beyond project schedules and tender amounts for more reliable project success.

4.4 Statistical analysis

4.4.1 Introduction

Relationships between work experience and various elements of procurement planning

Table 4. 4: Client needs assessment being made at the planning stage

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6.137[a]	3	2.046	4.343	.010
Intercept	392.624	1	392.624	833.597	.000
What is your work experience in construction projects	6.137	3	2.046	4.343	.010
Error	18.840	40	.471		
Total	737.000	44			
Corrected Total	24.977	43			
a. R Squared = .246 (Adjusted R Squared = .189)					

The level of significance (p-value) is 0.010, which is below the conventional threshold of 0.05. This indicates that the relationship between work experience and the practice of client-needs assessment being made at the planning stage is statistically significant.

The R-squared value is 0.246, which means that approximately 24.6% of the variability in the practice of client-needs assessment being made at the planning stage can be explained by variations in work experience.

There is a statistically significant relationship between work experience in construction projects and the practice of client-needs assessment being made at the planning stage.

Work experience explains about 24.6% of the variation in this practice. This suggests that while work experience plays a role, other influential factors influence whether a client-needs assessment is conducted at the planning stage.

Table 4.5: Project design influences on project schedule

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	3.910[a]	3	1.303	4.225	.011
Intercept	443.716	1	443.716	1438.301	.000
What is your work experience in construction projects	3.910	3	1.303	4.225	.011
Error	12.340	40	.308		
Total	811.000	44			
Corrected Total	16.250	43			

a. R Squared = .241 (Adjusted R Squared = .184)

The level of significance (p-value) is 0.011, which is below the conventional threshold of 0.05. This indicates that the relationship between work experience and the belief that project design influences the project schedule is statistically significant.The R-squared value is 0.241, which means that approximately 24.1% of the variability in the belief that project design influences the project schedule can be explained by variations in work experience.There is a statistically significant relationship between work experience in construction projects and the belief that project design influences the project schedule.

Work experience explains about 24.1% of the variation in this belief. This suggests that while work experience plays a role, other factors may also influence how individuals perceive the influence of project design on the project schedule.

Table 4. 6: Technical requirements and experience being the most important factor

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5.122[a]	3	1.707	3.537	.023
Intercept	434.441	1	434.441	899.929	.000
What is your work experience in construction projects	5.122	3	1.707	3.537	.023
Error	19.310	40	.483		
Total	769.000	44			
Corrected Total	24.432	43			

a. R Squared = .210 (Adjusted R Squared = .150)

The level of significance (p-value) is 0.023, which is below the conventional threshold of 0.05. This indicates that the relationship between work experience and the perception that technical requirement and experience is the most important factor in bid evaluation is sstatistically significant.

The R-squared value is 0.210, which means that approximately 21.0% of the variability in the perception that technical requirement and experience is the most important factor in bid evaluation can be explained by variations in work experience.

There is a statistically significant relationship between work experience in construction projects and the perception that technical requirement and experience is the most important factor in bid evaluation.

Work experience explains about 21.0% of the variation in this perception. This suggests that while work experience plays a role, other factors may also influence how individuals perceive the importance of technical requirement and experience in bid evaluation.

Table 4.7: The effect of project design to the bills of quantities

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	8.622[a]	3	2.874	5.803	.002
Intercept	495.031	1	495.031	999.557	.000
What is your work experience in construction projects	8.622	3	2.874	5.803	.002
Error	19.810	40	.495		
Total	875.000	44			
Corrected Total	28.432	43			
a. R Squared = .303 (Adjusted R Squared = .251)					

The level of significance (p-value) is 0.002, which is below the conventional threshold of 0.05. This indicates that the relationship between work experience and the impact of project design on Bills of Quantities, project schedule, and specifications is statistically significant.

There is a statistically significant relationship between work experience in construction projects and the impact of project design on Bills of Quantities, project schedules, and specifications.

Work experience explains about 30.3% of the variation in the impact of project design. This suggests that while work experience plays a role, there are other factors influencing the impact of project design as well.

4.4.2 Comparing Levels of Significance

Comparing levels of significance will assess the statistical significance of the relationships we're examining. Lower p-values indicate stronger evidence against the null hypothesis.

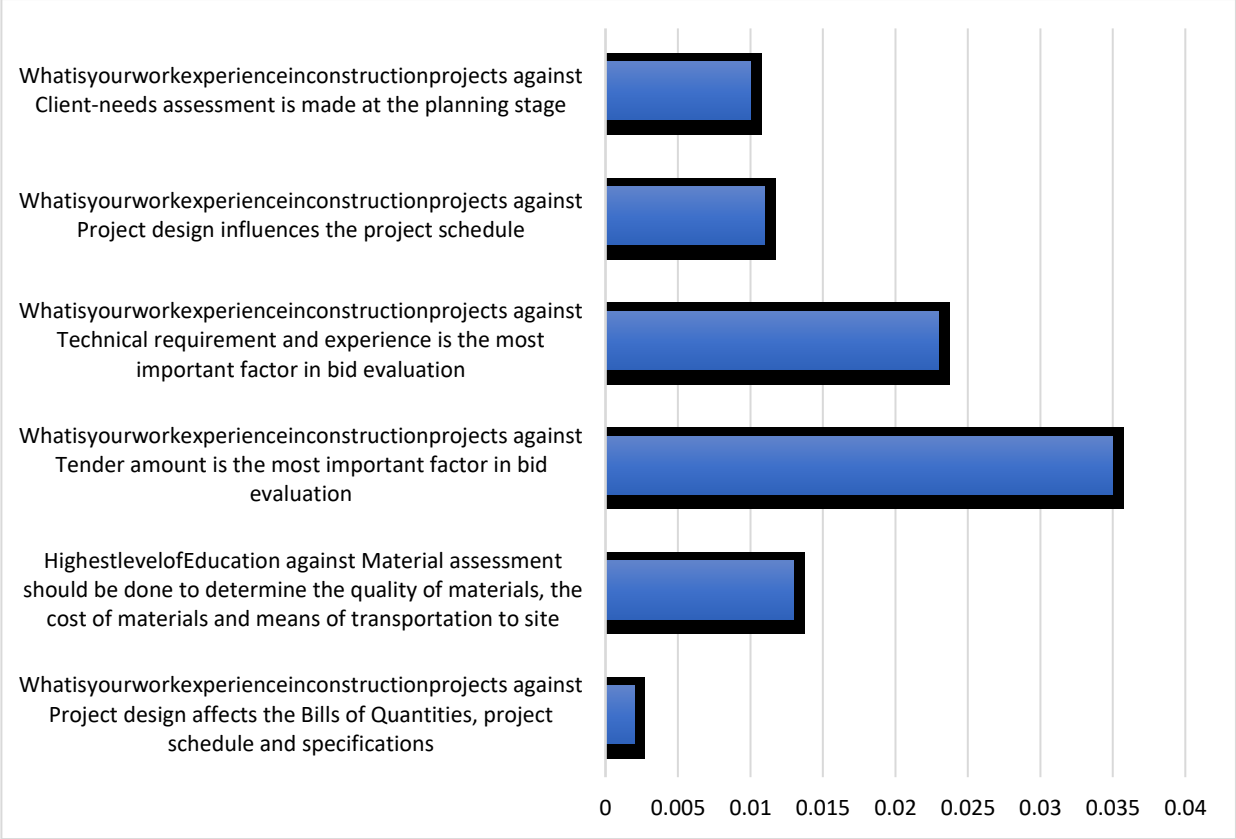

Figure 4. 5: Levels of Significance

Based on the comparison of p-values from the ANOVA analyses:

The lowest p-value is observed for What is your work experience in construction projects against Project design affects the Bills of Quantities, project schedule and specifications" (p-value: 0.002).

The second lowest p-value is for "Highest level of Education against Material assessment should be done to determine the quality of materials, the cost of materials and means of transportation to site" (p-value: 0.013).

The remaining analyses have higher p-values ranging from 0.023 to 0.035. This suggests that the strongest statistically significant relationships are observed for work experience

in construction projects with the perception of project design's impact on Bills of Quantities, project schedule, and specifications, followed by the relationship between highest level of education and the perception of material assessment.

4.4.3 Comparing R-squared Values

R-squared values provide insight into how well the variation in the dependent variable is explained by the independent variable(s). A higher R-squared value indicates that a larger proportion of the variability in the dependent variable is accounted for by the independent variable(s). Comparing R-squared values will help us understand which independent variable has a stronger explanatory power.

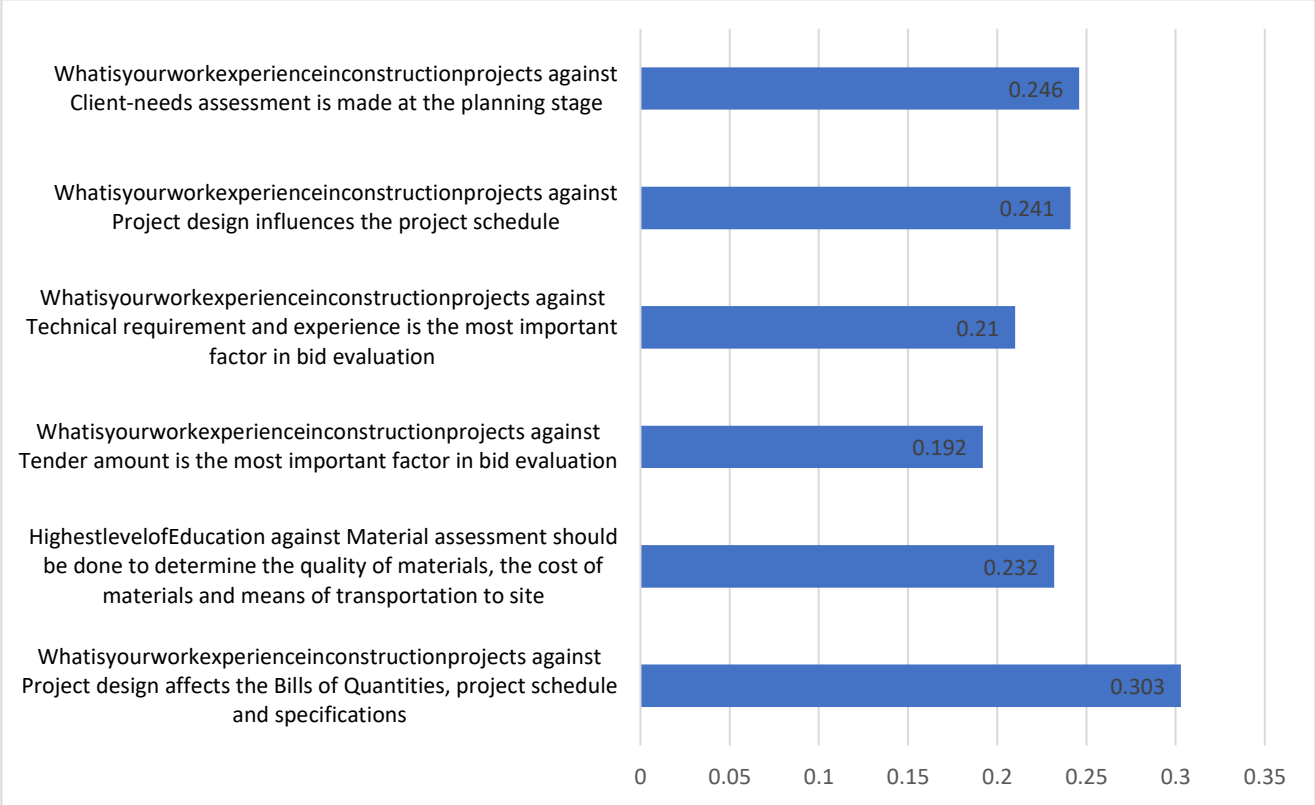

Figure 4. 6: R-squared Values

What is your work experience in construction projects against Project design affects the Bills of Quantities, project schedule and specifications (R-squared: 0.303)

Interpretation

The R-squared value of 0.303 indicates that approximately 30.3% of the variability in the perception that project design affects the Bills of Quantities, project schedule, and specifications can be explained by variations in work experience in construction projects.

What is your work experience in construction projects against Tender amount is the most important factor in bid evaluation (R-squared: 0.192)

Interpretation

The R-squared value of 0.192 indicates that approximately 19.2% of the variability in the perception that tender amount is the most important factor in bid evaluation can be explained by variations in work experience in construction projects.

What is your work experience in construction projects against Technical requirement and experience is the most important factor in bid evaluation (R-squared: 0.21):

Interpretation; The R-squared value of 0.21 indicates that approximately 21.0% of the variability in the perception that technical requirement and experience is the most important factor in bid evaluation can be explained by variations in work experience in construction projects.

What is your work experience in construction projects against Project design influences the project schedule (R-squared: 0.241):

The R-squared value of 0.241 indicates that approximately 24.1% of the variability in the perception that project design influences the project schedule can be explained by variations in work experience in construction projects.

What is your work experience in construction projects against Client-needs assessment is made at the planning stage (R-squared: 0.246)

The R-squared value of 0.246 indicates that approximately 24.6% of the variability in the perception that client-needs assessment is made at the planning stage can be explained by variations in work experience in construction projects.

Conclusion

Across these analyses, the R-squared values suggest that work experience in construction projects explains a moderate proportion of the variability in perceptions related to different aspects of construction project management and evaluation. The percentage of variation explained ranges from approximately 19.2% to 30.3%.

4.5 Comparison of actual data and the research perceptions

Table 4.8 shows the actual data from construction projects that have been completed in Kampala district. The data shows the budgets, program and challenges that justify the overruns in either cost or time.

Table 4. 8: Actual data from completed projects

	Name of project	Budget	Schedule	Major challenges
1.	Kampala Northern Bypass (17.5km)	Works contract Euros 67.4m Revised to Euros 129.9m	Commencement of civil works- 14 July 2014 Initial completion- July 2017. Revised completion date- 22 October 2021 Substantial completion- January 2022	There was an increase in the scope of work due to omissions and drainage design review was carried out.
2.	Renovation and Expansion of Christ the King Church Kampala Phase1 and 2	Initial contract amount: 8.8bn Ugx Revised amount 16bn Ugx	Commencement of work: 1 November 2016 Initial Completion- 30 April 2018 Actual Completion- 31 March 2023	Change in designs and required materials which resulted in delays. Issues related to timely payment of contractors.
3.	Amphitheatre for Church of Uganda- Namugongo	Initial contract amount: 13.1bn Ugx Revised amount: 12.5bn Ugx	Commencement of work: 23 August 2021 Initial Completion- 23 August 2022 Actual Completion- 31 May 2023	Change in design due to insufficient geological studies on the site. This in turn increased the scope of work.

Table 4.8 shows a comparison between actual executed projects and the perception from the data received from the respondents obtained from the questionnaires. The data highlights that design reviews during project execution, inadequate preliminary geological studies, and funding gaps are key contributors to delays and budget overruns. These challenges underscore the significance of a robust procurement plan, emphasizing the need for careful consideration of design elements, thorough geological assessments, and

ensuring adequate financial resources. A well-executed procurement strategy can proactively address these issues, promoting project efficiency, adherence to timelines, and cost-effectiveness by anticipating and mitigating potential obstacles during the planning phase.

4.6 Framework for procurement planning for construction projects

Table 4. 9: Procurement planning procedures

Procedure	Output	Action by
Selection of Project Manager/ Client's representative	Project Manager/ Contract Manager	Client
Client needs assessment	1) Identifying project requirements 2) Identifying the purpose of the project	Project Manager
Architectural and structural design Material assessment Project budget Project duration	1). Drawings 2). Bills of Quantities 3). Building Schedule 4). Specifications	Project Manager and Client
Bid selection criteria	1). Desired contractor attributes 2). Best evaluated bidder	Project Manager and Client
Bid Invitation	Tenders	PPDA, Project Manager and Client

As shown in Table 4.9 above, the procurement planning procedure begins with the inception of a construction project that involves the client initiating a bid process to appoint project managers or a representative. Once the selection is made, the elected

project manager embarks on a thorough client needs assessment. This crucial step aims to unravel the intricacies of the project by understanding its scope, specific requirements, funding sources, and overarching purpose.

Armed with a profound understanding of the client's needs, the project manager proceeds to initiate the project design phase. This phase is multifaceted, involving the meticulous development of both architectural and structural designs, and it unfolds in close collaboration with the client. Simultaneously, site preliminary studies like the geological studies are conducted to assess the characteristics of the construction site. Additionally, a material assessment is undertaken, focusing on factors such as material availability, durability, costs, and the potential need for importing materials.

Concurrently, the quantity surveying team takes charge of formulating an approximate project budget through bills of quantities. This budget serves as a crucial tool for the client, aiding in the preparation of cash flow projections and establishing financial criteria for potential bidding contractors. Recognizing the complexity of the project, the project manager also takes the initiative to craft a detailed project schedule. This schedule not only provides insights into the anticipated project timelines but also proves invaluable for the client in financial planning, aligning expenditures with the identified funding sources.

Following the meticulous project design phase, the client, project manager establish the bid selection criteria. Working with the Public Procurement and Disposal of Public Assets Authority (PPDA), the client and project manager collaborate to ensure adherence to proper bidding procedures and to ensure a transparent and fair bidding process. An invitation to tender is then extended, guided by the conclusions drawn during the project design stage.

Adhering to this systematic framework is instrumental in mitigating potential delays and cost overruns arising from variations and delayed payments to contractors. Furthermore, a well-structured project design significantly contributes to the overall quality of the construction project, thereby fostering customer satisfaction through the delivery of a finished product that aligns seamlessly with the client's initial expectations.

4.7 Comparison to previous studies

This study aligns strongly with existing literature, particularly the findings of Muhwezi et al. (2020), in emphasizing the central role of procurement planning in driving successful project outcomes. Both studies underscore the primacy of planning, with this research revealing high mean scores for key planning activities such as client-needs assessment at 82% and market price assessment at 86%. These figures substantiate Muhwezi et al.'s strong positive correlation ($r = 0.806$) between procurement planning and project performance. However, a nuanced point of agreement emerges regarding stakeholder involvement. While the importance of client-needs assessment is clearly acknowledged, actual client participation in document preparation scored notably lower at 52%, highlighting a critical implementation gap. This finding directly supports Muhwezi et al.'s observation that insufficient stakeholder involvement undermines planning effectiveness. This dissertation further reveals that the issue lies not in lack of awareness, but in poor execution, which ultimately hampers project performance.

A striking point of convergence is the budget adherence crisis, with the lowest score in the current dataset recorded for projects being completed within budget at 35%. This directly supports Nuwagaba et al. (2021), who asserted that poor procurement planning significantly undermines budget performance. The data in this study vividly illustrates the

real-world consequences of the planning-performance link that Nuwagaba et al. theorized. Additionally, both studies strongly emphasize of 81% in this study reflects practitioners' belief in the necessity of transparent and well-planned selection processes, echoing Nuwagaba et al.'s identification of contractor selection as a key planning variable. A further evolution in insight emerges with this study's emphasis on bid evaluation preferences: respondents showed a strong preference for technical expertise 82% over tender amount 42%, highlighting a shift in industry mindset from cost-centric to value-centric procurement. While prior studies like Nuwagaba et al. (2021) and Muhwezi et al. (2020) focused primarily on broader planning elements, this study reveals a more sophisticated understanding among practitioners that prioritizing quality over price can mitigate long-term project risks and costs that an important, forward-looking dimension to existing research.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The initiation of procurement planning occurs at the project's outset and serves as a fundamental cornerstone throughout its entire life cycle. This study aims to elucidate the ramifications of procurement planning on project performance, encompassing dimensions such as cost, time, quality, and customer satisfaction.

5.2 Conclusions

5.2.1 Procurement methods that are being practiced today

Based on the responses from the study participants, it was determined that certain procurement practices are commonly employed in recent construction projects. These practices include conducting client-needs assessments and market price evaluations for materials during the planning stage, where the market prices influence project design, Bills of Quantities, and project schedules. Competent staff typically develop designs with high accuracy, and contractor selection criteria are established prior to the bidding process.

However, it was observed that client participation in the preparation of designs, specifications, construction schedules, and Bills of Quantities is not typically sought before inviting bids. Furthermore, the research indicates that project designs often undergo alterations or deviations during construction due to evolving project requirements, unforeseen challenges, or changes in stakeholder preferences. These deviations from initial designs contribute to projects not being completed within the planned timeframe and budget.

5.2.2 The effect of procurement planning on construction project performance

The study showed that assessment of the clients' requirements emphasizes the recognition that aligning project goals with client expectations is crucial for overall project success. The acknowledgement that project design is made with client participation reinforces the idea that involving clients in the design process contributes to project success. This collaborative approach ensures that the design mirrors the client's vision and requirements, fostering a sense of ownership and satisfaction throughout the project.

The consensus on the importance of material assessment underscores the understanding that evaluating the quality, cost, and transportation logistics of materials is critical for informed decision-making, contributing to the use of high-quality materials within budget constraints and efficient transportation to the construction site. Additionally, the agreement that technical requirements and experience are the most important factors in bid evaluation reflects the significance of competence and expertise in selecting contractors, thereby enhancing the likelihood of successful project execution.

Given an understanding of the gaps in procurement planning, this research underscores the interconnectedness among project design, material assessment, bills of quantities, and project scheduling. It emphasizes the necessity for all stakeholders to synchronize these elements before the commencement of the bidding process, as they profoundly influence project cost, construction timeline, quality of the final deliverables, and overall customer satisfaction.

The study reveals that active client participation in the design phase plays a pivotal role in project success. Involving clients in architectural design, material selection, and work

scheduling proves instrumental in streamlining decision-making processes during construction initiation. To expedite the approval and delivery of materials, a thorough material assessment, considering factors such as availability, source, durability, and pricing, should precede the bidding process.

Furthermore, the research highlights the importance of prioritizing technical requirements during bid selection, deeming them fundamental criteria for awarding projects to contractors. This involves evaluating contractors' experience and assessing the availability of necessary resources crucial for project execution. Adopting these practices can contribute to enhanced project efficiency and successful outcomes.

5.2.3 Suitable procurement practices to achieve positive project performance

A mandatory practice is carrying out a comprehensive client needs assessment to understand project scope, requirements, funding sources, and purpose of the proposed project. Subsequently, the project manager collaborates closely with the client in the design phase, developing architectural and structural designs while conducting site studies and material assessments. This helps to mitigate any issues concerning several changes in scope. A well-structured project design enhances overall quality and customer satisfaction by aligning with initial expectations.

Concurrently, the quantity surveying team formulates a project budget through bills of quantities, aiding the client in financial planning. The financial plan will ensure that the project does not exceed the contract sum when the project is completed. It also helps to plan for any contingencies that may be faced in the project. A detailed project schedule is crafted to anticipate timelines and aid financial planning. Bid selection criteria are

established in collaboration with the Public Procurement and Disposal of Public Assets Authority (PPDA), ensuring adherence to proper bidding practices. Following these practices helps to minimise delays and cost overruns.

5.3 Recommendations

In the context of construction management, procurement planning is a critical process that involves systematically organizing and preparing activities necessary for acquiring essential materials, services, and resources for a construction project. This planning phase serves as a cornerstone for the project's overall success since it provides a framework for obtaining the necessary components in a timely, cost-effective manner while prioritizing quality. Procurement planning in construction management encompasses several vital elements. These elements include needs assessment, market analysis, budgeting, contracting strategies, legal requirements, contractor selection criteria and time schedule.

In the early stages of procurement planning in construction management, a meticulous assessment of client requirements is undertaken to establish a foundation for successful project completion. An extensive market analysis that evaluates the accessibility of construction materials, assesses prevailing pricing trends and evaluates the capacities and reputations of potential suppliers and contractors. Integral to this process is the identification and analysis of potential risks associated with procurement activities in the construction industry, such as supply chain disruptions, material cost fluctuations, and changes in project scope.

The subsequent phases of procurement planning involve budgeting, with a focus on estimating and allocating resources for procurement activities while ensuring alignment

with legal and regulatory standards. Criteria for selecting contractors, and subcontractors are established, taking into account factors like experience, financial stability, and past performance. Additionally, strategic decisions on contracting, negotiation terms, payment schedules, and performance guarantees are carefully devised.

A well-defined procurement timeline is crafted to synchronize with the overall construction project schedule, emphasizing the timely procurement and delivery of materials and services to mitigate potential construction delays. This collaborative effort in procurement planning involves construction managers, project managers, procurement professionals, and stakeholders, playing a pivotal role in ensuring the efficiency and success of the construction project.

This research has extensively talked about the effect of client needs assessment, market analysis, construction budgets, contractor selection criteria and project scheduling on construction project performance. Further research can be carried out on other elements of procurement planning such as risk assessment, legal and regulatory compliance and contracting strategies and how they affect project performance.

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APPENDICES

Appendix I: Questionnaire

Dear sir/Madam,

I am Asio Martha Okiring from Kyambogo University. I am carrying out a study as part of my Masters Degree in Construction Technology and Management on analysing the effect of procurement procedures on construction project performance – case study: construction projects around Kampala. This study is carried out exclusively for academic purposes and your responses to questions will be treated with utmost anonymity. Your participation in the study is of high value and confidentiality in regard to your response is guaranteed.

Thank you.

SECTION A

BACKGROUND OF THE RESPONDENT

1. **Type of company**

Client: ☐ Consultant: ☐ Contractor: ☐

2. **Highest Level of education**

Diploma ☐ Bachelors ☐ Masters ☐

Others

(Specify)_____

3. **Employment terms**

Permanent ☐ Contract ☐

4. **Position held**

Senior Management Level ☐ Lower management level ☐ Head of Section ☐

Others

(Specify)_____

5. **Profession/ Department**

Administration ☐ Procurement ☐ Accounting and ☐ Finance

Construction works & technical Services ☐ Audit ☐ Surveying ☐

Others (specify)

_____

6. **Work Experience of respondent**

Less than 5 years ☐ 6-10 years ☐ 11-15 years ☐ Above 15 years ☐

7. **Work experience of respondent in construction projects.**

Less than 5 years ☐ 6-10 years ☐ 11-15 years ☐ Above 15 years ☐

SECTIONB

PROCUREMENT PLANNING PRACTICES TODAY

1. Are you well informed about project planning stage in the procurement process in building constructions today?

Yes ☐ No ☐

2. If yes, to what extent do you agree with the following statements regarding the current procurement planning processes employed in construction projects today and the effect on project performance.

Scale: Strongly agree **(SA) = 5,** Agree (A) = **4,** Neutral **(N) =3,** Disagree **(D) =2** Strongly Disagree **(SD) = 1**

STATEMENT	5	4	3	2	1
Client needs assessment is made at the planning stage					
Assessment of market prices for materials is made at the planning stage					
Market prices of materials affects the project design					
Project design affects the Bills of Quantities, project schedule and specifications.					
Designs, specifications, construction schedule and Bills of quantities are prepared before invitation to bidders.					
Designs, specifications, construction schedule and Bills of quantities are prepared with client participation					
The designs are made by competent staff with utmost accuracy					
Criteria for selection of contractor is made before bidding process begins					
Procurement schedules and budgets are followed with no overlaps.					
The designs made at planning stage are followed throughout the construction.					
Construction projects are completed within the budget.					

SECTION C: EFFECT OF PROJECT PLANNING ON PERFORMANCE

To what extent do you agree with the following statements regarding their influence on whether a construction project will be completed within the project duration, within the budget and quality.

Scale: Strongly agree **(SA) = 5,** Agree (A) = **4,** Neutral **(N) =3,** Disagree **(D) =2**

Strongly Disagree **(SD) = 1**

STATEMENT	5	4	3	2	1
Assessment of the clients' requirements					
Project design is made with client participation					
Project design is influenced by the availability of materials.					
Material assessment should be done to determine the quality of materials, the cost of materials and means of transportation to site					
Performing risk assessment before bid invitation and planning contingencies.					
Project design influences the project schedule					
The quality of the finished product is affected by the project schedule					
Procurement monitoring plan by the consultants affects the performance of the contractors					
Technical requirement and experience is the most important factor in bid evaluation					
Tender amount is the most important factor in bid evaluation					

Please state other factors in procurement planning that affect the performance of a project if any.

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Thank you for your participation may God bless you.

Appendix II: Introductory Letter

Appendix III: Plagiarism Test Results