Practitioner Insights on Determinants of Procurement Contract Management and Constraints in Government Construction

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DOI: https://dx.doi.org/10.47772/IJRISS.2024.814MG0028

Received: 07 November 2024; Accepted: 19 November 2024; Published: 23 December 2024

ABSTRACT

The study aimed to examine the effects of compliance and monitoring of performance of public sector construction projects, assess the effect of contract documentation and determine the technical capabilities and constraints faced by contractors on the performance of public sector construction projects. A quantitative correlational research design was adopted, and a research questionnaire was used for data collection. The study findings revealed compliance with the contractual terms by contractors, enhanced procurement contract management with a mean of 4.10 and standard deviation of 1.145. Further, 80.2% of the respondents agreed that failure to understand the contract document leads to mistakes in contract implementation, which causes unnecessary rework and increases project costs. Monitoring procurement contracts is important in project management because it helps the contractors to remain focused. These findings are supported by standard deviation between 1.072 and 1.197 which implies consensus among the respondents. The study concluded that compliance with contract terms and conditions as well as monitoring procurement contracts were metrics that on their own, could lead to a positive influence on contract management. These metrics must work conjunctively with other metrics for them to lead to a positive influence on project performance. Contract documentation and technical capabilities were seen to be impactful on project performance as they could lead to a positive change in contract management. The study recommends that the government emphasizes contract documentation and contract monitoring of projects and Contract Manager involvement at the initial stages of the project. The study is limited to public sector, therefore recommends that a similar study be conducted in private sector to establish outcomes in comparison to public sector experience.

Keywords: compliance, constraints, contract documentation, determinants, procurement contract management

INTRODUCTION

Public procurement is when the government purchases goods and services and works from the private sector (Bosio & Djankov, 2020). Public procurement is necessary for 12 percent of the global GDP in 2018 because governments cannot produce all goods, services, and works they usually require (Bosio & Djankov, 2020). Due to the colossal amounts involved in procuring goods, services, and works, public procurement is usually regulated to reduce corrupt activities (Bosio, et al., 2020). On the other hand, contract management is concerned with managing projects and contracts secured through the procurement process from start to finish (OECD, 2011). Therefore, it ensures compliance with procurement contracts' terms and service level agreements so that suppliers deliver the outcomes agreed upon.

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue XIV November 2024 | Special Issue on Management

RESEARCH OBJECTIVES

The objectives of the study were as follows:

1. To examine the effect of compliance on the performance of construction projects
2. To determine the effect of monitoring on the performance of construction projects
3. To assess the effect of contract documentation on the performance of construction projects.

LITERATURE REVIEW

Procurement Contract Management Practice in Construction Projects

Effective procurement contract management lags in many countries. For instance, a study by Pooworakulchai, et al., (2017) involving the factors affecting the contract administration of government construction projects in Thailand, discovered that compliance with procurement contract management of government projects is an issue that requires attention. This is because many government projections in Thailand lack qualified personnel from both the public and private sectors to manage the projects. Additionally, documentation of procurement and project executions and poor work processes are other hindrances to effective procurement contract management in Thailand (Pooworakulchai , et al., 2017).

Equally, a study by Doloi, et al., (2012) on factors affecting construction projects in India, observed that government projects delay due to poor procurement contract management practices related to a lack of staff commitment at both procurement and project executions, insufficient site inspections, coordination, and management. Further, poor planning, lack of project scope clarification, communication, and substandard contracts are major obstacles to effective and efficient procurement contract management practice in India (Doloi, et al., 2012). Similar to India, procurement contract management lags in Vietnam. For instance, a study by Long, et al., (2004) involving large construction projects in Vietnam revealed the incompetence of staff involved in awarding and designing contracts, poor estimations of procurement costs, and project timelines. Other obstacles include the social and technological issues at sites and improper techniques.

Effective and efficient procurement contract management practice in government projects in Africa also lags. For example, Bagaya & Song, (2016) study involving the factors influencing schedule delays of public construction projects in Burkina Faso, revealed poor contractor performance as a result of ineffective procurement contract management practice as one of the causes of project completion delays in Burkina Faso. In Kenya, a study by Kiarie (2020) on contract management practices and performance in awarding contracts to contractors, revealed that the Kenyan government loses hundreds of millions of taxpayers' money due to improper contract management and procurement practices in government projects. Many government projects in Kenya are usually of poor quality if completed, the majority of them are unfinished and corruption practices are common in the award of projects to contractors (Kiarie, 2020). Zimbabwe also experiences similar challenges to Kenya. For example, Musanzika, (2013) case study of major government projects which included those associated with the procurement and supply of prepaid meters for Zimbabwe Electricity Supply Authority (ZESA), road, and hospital constructions, reveals incompetence in administering procurement and contract management as a major hindrance to the effective management of government projects in Zimbabwe. The other challenge observed was high levels of corruption practices due to failures to carry out transparent contracts to contractors.

Despite research studies on determinants of procurement contract management having a wider geographical coverage across countries, the literature shows a lack of research in the least developing countries in sub-Saharan Africa. Very few research such as Musanzika (2013); Kiarie(2020); Bagaya & Song (2016) study have been carried out in the sub-Saharan region. Therefore, the study aimed to close this research gap among others identified.

Mchopa (2013) researched the effectiveness of procurement contracts management towards accomplishing an incentive for cash in procurement of works. The study utilized a case ponder research plan, whereby

purpose and random inspecting procedures were utilized in choosing a sample of 60 respondents. The researcher gathered information utilizing questionnaires, interviews, perceptions, and narrative audits.

The researcher used quantitative and subjective techniques to break down the information through "interpretive" and "reflexive" approaches. The finding, in addition to other things, indicated that a contract had all the fundamental terms and conditions to ensure the incentive for cash standard, making contracts to be effectively executed according to the terms. The study additionally demonstrated that time management, quality, expenses, and hazard control results were fundamental in effective contract management. Love (2014) surveyed the job of obtainment contract administration within the adequacy of venture administration at MIC-Tanzania. The researcher utilized overviews and interviews where specialists from Supply Chain division and other venture partners were welcome to share their encounters with the equivalent. This research found that viable assignment administration is highly dependent on providers' consistency with terms and conditions, providers' specialized ability and near observation of providers amid venture usage. The study presumed that contract administration is basic for viable undertaking, administration and as such the analyst recommended enlisting progressively experienced and qualified staff for its contract administration work. The research additionally supported using electronic contract management to make the process more effective.

Chepkoech (2012) undertook a study to examine the housing provision by the city of Nairobi in Kenya. The study relied on a sample of 150, mostly made of experts and contractors in the construction industry within Nairobi City. At the heart of the study was the extent to which factors, such as contract monitoring, documentation, and the contractors' expertise, contributed to quality housing projects. The study found a statistically significant value among independent and dependent variables using regression analysis. The researcher employed stratified sampling in selecting the research participants. The study concluded that for any project to be successful, monitoring, expertise of the contractors, and documentation are vital for efficient project completion, and the study accordingly recommended ensuring that such protocols are followed during project implementation.

Determinants of Procurement Contract Management

According to Ochola & Kitheka (2019), project management determinants can lead to effective and efficient management of projects, including government projects. They involve contract documentation, compliance, cost management, and monitoring.

Contract Documentation and Compliance

According to Kozlovska, et al., (2016), contract documentation is an information resource that facilitates the planning and management of projects. Contract documentation enables all project stakeholders to have visibility of the project status. Project documentation provides updates on the project if properly implemented, which enables the project's sustainability in terms of desired costs, time, and quality (Ochola & Kitheka, 2019).

Contract compliance refers to how the contract parties comply with the contracts (Kituyi & Makokha, 2020). It looks at compliance in terms of contract terms and conditions (Ochola & Kitheka, 2019). According to the World Bank, (2017), contract compliance enhances transparency and accountability and improves the delivery of public procurement projects. Ochola & Kitheka, (2019) observed that procurement contract management is enhanced when parties comply with the terms and conditions of the contract. Thus, Contract compliance promotes professionalism and value for money in public procurement.

Contract Cost Management and Monitoring

Contract cost management is the process that ensures adherence to the budgeted cost during project execution (Ochola & Kitheka, 2019). According to Al-Nady, et al., (2016) effective contract cost

management ensures projects are completed within budget by controlling specific costs. It also ensures that future cost estimates align with the expected revenues. Further, effective contract cost management enables the maintenance of predefined costs in contract agreements and tracking actual costs against the planned costs throughout the project life cycle (Ochola & Kitheka, 2019).

According to Onyango & Juma (2020), contract monitoring involves collecting information about the project to assess whether the predetermined project outcomes are being done. Ochola & Kitheka, (2019) observed that contract monitoring ensures that goods, services, and works are of good and acceptable quality. Further contract monitoring ensures all parties involved adhere to the contract terms and conditions. Proactive monitoring of projects is important as it avoids emergency procurement which contradicts effective and efficient procurement contract management (Aisha, 2019). Thus, contract monitoring ensures project teams use and manage resources in compliance with the agreed quality, time, and cost contract terms.

Dispute Resolution in Contract Management

According to Sithole (2016), dispute can be defined as an unsolved issue if one of the parties to a contract is not pleased with the decision made. Contract disputes are unfortunate and can occur almost every day and are not always effectively controlled (Amoa-Abban, 2017). These disagreements can arise from various factors, including design flaws, differing interpretations of contract terms, delayed payments, or disputes over work quality. In Zambia contract desputes in the Construction of Government projects have become a norm, the Auditor Generals Report for the past five years (2019-2023) has ciated a number of contract disputes ranging from technical inadequacy of the contractor, delayed approvals of the technical specifications and contract variations,change of scope of works, late giving of site, time extensions, delayed payments, poor and shady works by the contractors, lack of enforcement of the advance securities and performance bonds and lack of assisgning contract managers on contracts and design errors. According to Tolson (2013), the client can disagree with the main contractor if the main contractor does not deliver the completed structure on time. The key to minimizing the impact of these disputes is to manage them effectively and efficiently through consistent contract monitoring and effective communication. Additionally, to reduce contractual disputes and difficulty, all parties must efficiently carry out their tasks according to the contract (The World Bank, 2018).

Contract disputes can be avoided by putting in place deliberate measures like regular investigations and monitoring during each phase of the project to reduce uncertainties, setting up contingency plans and enforcing the performance guarantee. Additionally, Project managers from both the contractor and the client must understand how disputes can be avoided and have sufficient knowledge about alternative dispute resolution (ADR) methods. On the other hand contractors are encouraged to embrace Change management in construction Projects as they often a project's budget, cost, or schedule.

Procurement Contract Management Constraints

Constraints to procurement contract management are limits within which the project is expected to operate (Eby, 2022). Further, constraints prevent organizations from fulfilling their objectives (Lau & Kong, 2006). Construction projects' procurement contract management process involves several stakeholders forming a multi-party working environment. According to Bhavsar & Solanki (2020), multi-party working environments are prone to conflicts and disputes which may affect the successful implementation of procurement contract management of construction projects. However, despite the adverse effects of constraints on construction projects, project teams still must meet constraints and expectations regarding quality, cost, and time. It is, therefore important to know the constraints to procurement contract management of construction projects to prevent wastage of resources.

According to Lau & Kong (2006) and Bhavsar & Solanki (2020), constraints to the effective management of projects are economic, legal, environmental, technical, and social constraints.

Economic and Legal Constraints

Economic constraints in managing construction projects, usually involve budget limits (Bhavsar & Solanki, 2020). Economic constraints affect project procurement and contract management when budgeted funds for construction projects are improperly allocated. For instance, Lau & Kong's (2006) study confirms that project quality and performance are affected when project funds are mishandled. Further, based on Sagar, et al., (2022) study, economic constraints due to the improper allocation of money to construction projects, were ranked among the top five constraints. Based on this, if the economic constraints are not managed, project funds can be misallocated and sometimes misappropriated leading to the failure of projects.

Legal constraints in procurement and contract management of construction projects result from regulations such as safety regulations that govern construction projects (Lau & Kong, 2006). Legal constraints may affect the delivery schedules of construction projects by extending their completion dates. They may also affect the project's planning process, such as causing delays in obtaining the necessary approvals before the commencement of work (Lau & Kong, 2006). A project management study in Ghana by Venter (2005) observed that legal constraints in construction projects in Ghana are eminent. According to the researcher, legal constraints involve legal battles between the awarder and the implementer of projects. Legal constraints may also involve land acquisition issues, difficulties obtaining work permits, contractual document disputes, design changes, and building regulations (Bhavsar & Solanki, 2020).

Technical, Social Constraints and Environmental Constraints

Environmental constraints in the procurement and contract management of projects refer to the general public's concerns regarding the potential environmental harm caused by construction projects (Lau & Kong, 2006). Bhavsar & Solanki (2020) identify environmental constraints as difficulties in obtaining environmental clearance certification for air, water, and noise pollution. Environmental constraints can delay or halt the construction of projects. For instance, a study by Muslihudin, et al., (2022) revealed pollution as an environmental constraint to the completion of a geothermal power plant in Indonesia. Thus, environmental constraints may significantly affect the project's future since they have a huge influence on the members of the public.

Technical constraints may be attributed to the shortage of skills and lack of detailed management of contracts (Bagaya & Song, 2016). A study by Waigwa & Njeru (2016) on the factors influencing the management of procurement contracts identifies technical skills as constraints to procurement contract management. Further, Bhavsar & Solanki (2020) identified some technical constraints, including a lack of skilled engineers and project managers, incorrect drawings and designs, poor coordination, power delegation failures, and poor cost and time planning. Musanzika (2013) observed that skill, experience, motivation, and commitment are technical-related constraints among public servants tasked with the management of projects.

According to Lau & Kong (2006), social constraints are social factors within construction project environments. They result from influence from a small group comprising key project members. It is important to note that despite the social factors being viewed as minor, they may significantly affect the success of construction projects (Lau & Kong, 2006). Bhavsar & Solanki (2020) identified social factors such as politics, beliefs, emotions, ownership, and the honesty/dishonesty of media reporting as social constraints to construction projects.

Effect of Determinants and Constraints on Project Performance

Several studies have attempted to establish the effect of procurement contract management determinants. For instance, a study by Yegon & Mbeche, (2018) on the determinants of procurement contract management confirms that the determinants of procurement contract management affect the performance of projects. For example, the regression results involving contract documents and compliance with project contract terms explained about 72.2% of variations in the dependent variable. This confirms that contract documentation

and compliance with contract terms influence the effectiveness of project contracts (Yegon & Mbeche, 2018).

Similarly, Kiarie's (2020) study of contract management practices and performance, demonstrated that contract cost management positively affects project performance. Likewise, the researchers observed that relationship management, including project monitoring through feedback, positively affects the project's performance. This means that cost and relationship management improvements directly improve project performance. Further, Onyango & Juma, (2020) study involving the role of contract monitoring on the performance of construction contracts, confirmed that contract monitoring influences the performance of projects. This is because all the predictor coefficients of contract monitoring were positive indicating a positive performance effect on project contract performance.

In terms of procurement contract management constraints, a study by Doloi, et al., (2012) involving the factors affecting delays in Indian construction companies, shows project constraints such as lack of commitment, inadequate planning, lack of communication, and poor coordination contribute to project delays. Further, results from the regression model confirmed that project constraints harm project performance. Similarly, Batool & Abbas (2017) study revealed that social constraints such as political will influence project performance. Projects that lack political will are usually delayed and often end up unfinished. The researchers also observed that economic constraints such as government failure to release the funds on time to finance project completion also negatively affect project performance. Legal constraints as a result of bad laws also have an adverse influence on project performance (Batool & Abbas, 2017).

Further, a study by Long, et al. (2004) highlighted the negative influence of technical constraints such as incompetent designers and contractors. According to the researchers, the project's success is adversely impacted when the contract is given to a team that is not competent enough to implement the project. Other constraints such as social constraints (fraudulent practices and kickbacks) and environmental constraints (site clearance), also adversely influence project performance (Long, et al., 2004). Although the literature shows the presence of research on determinants and constraints of procurement contract management on construction projects, the majority of the research such as Ochola & Kitheka, (2019); Al-Nady, et al., (2016); Kituyi & Makokha (2020); Aisha, (2019) studies have focused only on the determinants. Similarly, the literature shows that research studies have a limited focus on a few constraints. For example, studies by Lau & Kong (2006); Sagar, et al.,(2022); Bhavsar & Solanki (2020); Muslihudin, et al., (2022), and Bagaya & Song (2016) have only focused on the constraints. Few research studies such as Oluka & Basheka (2014) have holistically looked at both the determinants and constraints of procurement contract management.

THEORETICAL REVIEW

The study was supported by the principal-Agency theory and the theory of Constraints (TOC). The principal-agency theory supports the study by providing a clear elaboration of the expectations of the principal (government) and the agent (contractors) to enable high performance of construction projects while TOC, explains the challenges known as constraints that impede the successful completion of construction projects. According to Tan (2015), the principal agency theory describes the performance of the organization concerning the various contracts it is engaged in. Jan & Ho (2006) applied TOC to solve construction project problems involving unnecessary time wastage during project implementation. This study found that time delay is among the major constraints in the delivery of construction projects.

METHODOLOGY

Research Hypotheses

The following hypotheses were formulated for the study:

H_0: Compliance with contractual terms and conditions does not affect the performance of construction projects.

H_1: Compliance with contractual terms and conditions affects construction project performance.

H_0: Monitoring of procurement contracts does not affect the performance of construction projects.

H_1: Monitoring of procurement contracts affects the performance of construction projects

H_0: Contract documentation does not affect the performance of construction projects.

H_1: Contract documentation does affect the performance of construction projects

H_0: The technical capabilities of contractors do not affect the performance of construction projects.

H_1: Technical capabilities of contractors affect the performance of construction projects.

Research Design

The study adopted a quantitative correlational research design to align with the research questions. This is because Kombo and Tromp (2006) explain that correlational design research can help researchers understand the complex relationships between different variables. Therefore, in this research, the researcher measured these variables in realistic settings and determined their relationships. The ever-increasing need for a representative statistical sample in empirical research has created the demand for an effective method of determining sample size. The formula proposed by Israel (1992) cited by Mugenda and Mugenda (2019) was used to determine the sample size to address the existing gap. When the population number or estimate is known, the formula is applied.

$n= N/1+N\ (e)^2$

Where n is the sample size, N (150) is the population size, and e is the number of precisions that was set at 0.05. Therefore, the estimated sample size was 109.

Sampling Technique

The study used random sampling to access the sample. A simple random sample takes a small, random portion of the entire population to represent the entire data set, where each member has an equal probability of being chosen Mugenda & Mugenda (2003). The sampling frame created sub-groups of procurement practitioners from government ministries in education, health, local government, works and supply in Lusaka. Simple random sampling was applied to sample the respondents from the sub-groups.

The data collection instrument to be used comprised a structured questionnaire. According to Kothari (2009), questionnaires enable a large amount of data to be collected from a wider population of participants. The questionnaire comprised the general information of the participants, information on the determinants and constraints of procurement contract management, and information on project performance. Questionnaires were self-administered and uploaded in Microsoft Forms to be delivered online to the participants. The likert scale was used in the questionnaire. A Likert scale is a type of rating scale commonly used in surveys and research to measure attitudes and opinions (Kothari, 2014). It typically consists of a series of statements or questions to which respondents are asked to indicate their level of agreement or disagreement on a scale, usually ranging from "strongly agree" to "strongly disagree." The likert scale was used in order provide a quantitative measurement of subjective data, allowing researchers to gather and analyze data on attitudes, opinions, and perceptions on the phenomen.

Normality Test

A 0.05 level of significance was adopted in the study to test the hypotheses formulated. The 95% significance level was chosen because, in a normality test with a 95 percent confidence interval, the

researcher only has a 5 percent chance of being wrong. 0.05 level of significance tests are based on the normal distribution of data sets, which require testing for the normality of data distributions.

A 0.7 Cronbach's Alpha statistic was used to test the reliability of the data set to assess its internal consistency and to measure the reliability of the data collection instrument. 0.7 was chosen because Cronbach alpha values of 0.7 or higher indicate acceptable internal consistency in a reliability test. Additionally, analysts frequently use 0.7 as a benchmark value for Cronbach's alpha. The items are sufficiently consistent at this level and higher to indicate the measure is reliable. Typically, values near 0.7 are minimally acceptable but not ideal.

The data preparation first involved exporting the questionnaires obtained from the participants into Microsoft excel. This was followed by editing and error checking to ensure the data was of good quality for analysis. The data analysis comprised a descriptive and inferential analysis. The descriptive analysis summarized the findings through the means and standard deviations. Inferential analysis will provide a detailed analysis of the study. Regression analysis was employed to analyze the hypotheses, and the F-test from the regression outputs tested the significance of the hypotheses. IBM statistical package for social science (SPSS) version 27 software was used to support the analysis.

RESULTS

For the gender distribution, 26.6% of the respondents were female compared to 73.4% of the males. The high number of male respondents can be attributed to the prevalence of males in the construction sector compared to female in Zambia.

Education level

Table 1. Highest level of education

Education	N	%
Others	2	1.9%
Bachelor’s Degree	54	50.9%
Certificate	1	0.9%
Diploma/Advanced Diploma	6	5.7%
Doctorate Degree	1	0.9%
Master’s Degree	38	35.8%
Post Graduate Diploma	4	3.8%

In the context of education qualification, 3.8% of the respondents had Post Graduate Diploma, 35.8% with Master’s Degree, 0.9% with Doctorate Degree, 5.7% with Diploma/Advanced Diploma, 0.9% with Certificate and 50.9% of the respondents with bachelor’s degree, while only 1.9 had other qualifications. The high number of respondents with bachelor’s degree level is in tandem with the increasing levels of persons with high education qualification in Zambia.

Government ministry represented.

When asked which Government Ministry the respondents represented, 9.4% represented education, 10.4 health, 30.2 represented local government, and the majority, 46.2% represented works and supply. Conversely, a few, 3.8%, represented both works, supply, and local government.

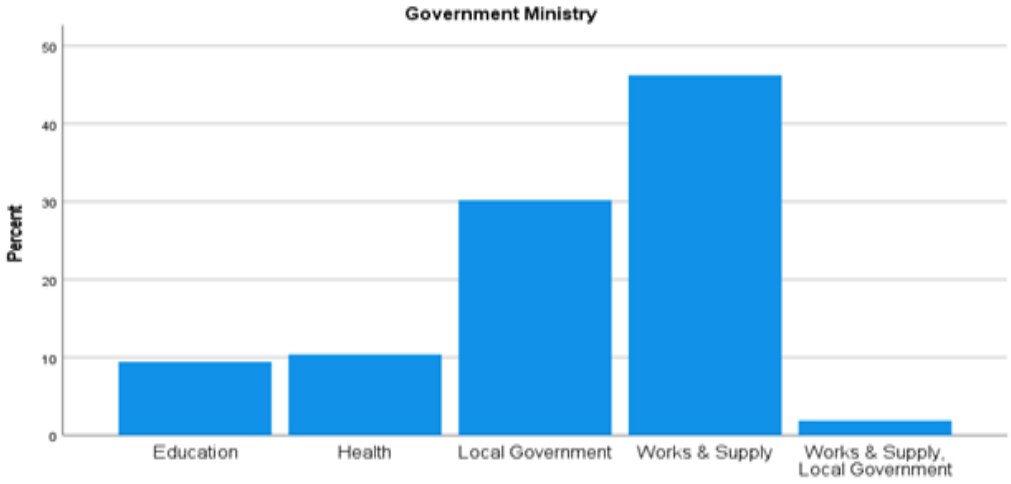

Figure 1. representation of respondents from public institutions

Role in Department

Table 2. Roles in department

Role in Department	N	%
Administrator	6	5.7%
Department Head	12	11.3%
Manager	18	17.0%
Officer	30	28.3%
Other	16	15.1%
Supervisor	24	22.6%
Total	106	100

The study findings revealed that majority % of the respondents 28.3% were officers in the various departments they represented, 22.6% were supervisors, 17% were managers, 15.1% held other roles apart from those mentioned above, 11.3% were department heads and 5.7% were administrators.

Experience in procurement contract management in government projects

Among the respondents majority 34% had less than 2 years' experience, 31.1% had 3 to 5 years of experience, 21.7% had 6 to 10 years of experience and the other 13.2% had 10+ years of experience in procurement contract management in government projects.

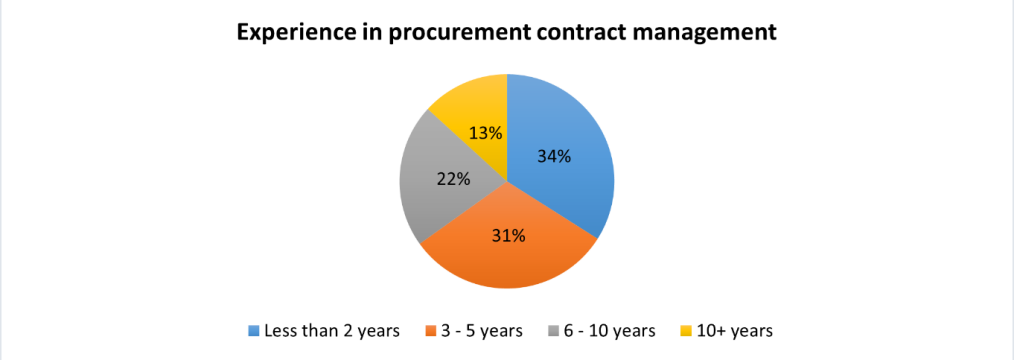

Figure 2. Experience in procurement contract management

Determinants of procurement contract management of government construction projects

Compliance with contractual terms

Objective one of the study sought to examine the effect of compliance on the performance of construction projects, and below are the study findings from the responses.

The mean of compliance with contract terms metrics was examined to understand the respondents' average opinion regarding the influence of the compliance levels on procurement contract management on government contracts. On the other hand, the standard deviation of the compliance with contract conditions was examined to understand the dispersion of the data from the mean. In this context, for example, compliance with the contractual terms by the supplier/service provider enhanced the procurement contract management with a mean of 4.10 and standard deviation of 1.145.

Table 3. Compliance with contractual terms

Statement	Frequency rating					Mean	Std. Dev.
	5	4	3	2	1		
Compliance with the contract conditions by the supplier/service provider enhances procurement contract management	6	7	6	37	48	4.10	1.145
The organization complies with the contract conditions by awarding the contract to the most suitable party	4	5	15	39	41	4.05	1.042
Contractors comply with the general contract's conditions	4	6	26	44	24	3.75	1.002
Contractors comply with the specific contract's conditions	2	9	26	44	23	3.74	.965
The organization enforces compliance with contract conditions	48	6	20	46	28	3.84	1.017
There is strong contract compliance between supplier and service provider	2	13	23	45	21	3.67	1.004
Contracts are awarded to the most suitable party	5	11	17	37	34	3.83	1.141
Procurement contracts are written in clear language	4	11	14	39	36	3.89	1.119
Terms and conditions are clear to all parties	5	9	19	37	34	3.85	1.120
Contractual compliance is reviewed periodically	6	11	27	33	27	3.62	1.156

Tahir and Darton (2010) states that a mean more than 3.5 indicates that most of the respondents agreed on that variable and the lowest Standard deviation indicates that there is a stability of ideas on the specific variable. Therefore, the mean value of 4.10 indicates that the majority of the respondents agreed and the findings are reliable. The organizations comply with the contract conditions by awarding the contract to the most suitable party had a mean and standard deviation of 4.05 and 1.042 respectively. Compliance with the general contract's conditions had a mean of 3.75 and standard deviation of 1.002. Compliance with the specific contract's conditions had a mean and standard deviation of 3.74 and 0.965 respectively.

It can be stated that the findings reveal that all the metrics of compliance with contractual terms except enforcement levels of compliance with contract conditions had means between 3.62 and 4.10 indicating that on average the compliance levels had a moderate effect on procurement contract management in government projects. The lower standard deviation values between 0.965 and 1.156 indicate that data was clustered around the mean and that the findings are valuable.

Monitoring of procurement contracts

The second objective of study sought to determine the effect of monitoring on the performance of construction projects and the findings are as follows:

Table 4. Monitoring of procurement contracts

Statement	Frequency rating					Mean	Std. Dev.
	5	4	3	2	1		
The tender award process is undertaken within reasonable time	5	25	19	40	15	3.33	1.146
The Government closely monitors and supervises projects undertaken by contractors and other entities	6	23	23	33	19	3.34	1.184
Periodic monitoring and evaluation reports are produced	4	23	24	36	17	3.37	1.120
Remedies pointed out from monitoring and evaluation reports are implemented accordingly	3	23	23	43	12	3.36	1.047
The issuance of completion/partial completion certificates to the contractor is done without undue delay	6	21	32	32	13	3.23	1.098
Staff are trained in Training of Contract Monitoring	7	20	32	28	17	3.27	1.153
Written procedures and policies are followed	3	17	29	37	18	3.48	1.056
Terms are clear to the contractors	4	13	13	42	32	3.82	1.129
Undertaking onsite monitoring to monitor progress	3	15	23	43	20	3.59	1.052

According to the study findings the tender award process is undertaken within reasonable time had a mean of 3.33 and standard deviation of 1.146, The Government closely monitors and supervises projects undertaken by contractors and other entities had a mean of 3.34 and standard deviation of 1.184, Periodic monitoring and evaluation reports are produced had a mean 3.37 and standard deviation of 1.120. On the other Undertaking onsite monitoring to monitor progress had a mean of 3.59 and standard deviation of 1.052. The metrics used to measure monitoring procurement contracts had means between 3.23 and 3.82 and standard deviation values between 1.047 and 1.84.

Peat & Barton (2005) explains that a mean of between 2.5 and 3.5 in a five-point Likert scale indicates that the independent metrics affect the dependent variable to a moderate or neutral. In this context, monitoring of procurement contracts affects performance of government projects to a moderate. This implies that, on average, the respondents tended to think that the measured metrics affected procurement contract management, which was agreed upon. In this context, the monitoring of procurement contracts ensures quality of services/goods offered; contract monitoring of adherence to terms of reference and generally affects implementation of government projects.

Table 5. Contract documentation

Statement	Frequency rating					Mean	Std. Dev.
	5	4	3	2	1		
Failure to understand the contract document may lead in unnecessary argument between parties and result in loss of reputation and business	5	6	10	30	53	4.19	1.088
Failure to understand the contract document may lead in misinterpretation of the needs of the contract which result in loss of trust among the contracting parties	4	4	7	36	53	4.25	1.017
Failure to understand the contract document may potentially leads to mistakes in implementation of contract which causes unnecessary rework and increase in project cost	5	2	7	38	52	4.27	1.019

Understanding of contract documentation is very relevant and important in order to sustain the desired cost, time and quality in contract implementation	5	5	7	31	56	4.26	1.052
For effective implementation of a contract, the contractor must have the ability to understand the contract documentation thoroughly	7	3	5	30	59	4.26	1.137
Contracts need to be documented at every stage of implementation	4	6	9	36	49	4.16	1.064
Effectively communicating the work progress to all keys stakeholders and the expectation of each one of them in completion of the contract at the required time and in accordance to quality expectation	4	3	10	40	47	4.18	.998
Organizations need to create and maintain authentic and reliable records to protect the integrity of records as long as they are required	3	5	7	36	53	4.28	.969
Inadequate understanding of contract documents leads to serious contractual problems and the output of the projects affected in term of quality, cost and time	5	3	9	38	49	4.18	1.046
Complexity of contract documents was also found to have an influence on the ability of the contracting party to understand the contract documents	5	5	37	39	18	3.95	1.084
The clarity of the contract documents is also considered an important factor determining the understanding of contract documents. Clarity means easy to understand and parties have no difficulty in translating the documents	5	4	16	42	37	4.01	1.020

The third objective of the study aimed at assessing the effect of contract documentation on the performance of construction projects. From the study findings, the mean of contract documentation metrics were examined to understand the average opinion of the respondents regarding the influence of contract documentation on contract management. On the other hand, the contract documentation's standard deviation was examined to understand the dispersion of the data from the mean. In this context, Failure to understand the contract document may lead in unnecessary argument between parties and result in loss of reputation and business had a mean of 4.19 and standard deviation of 1.088; failure to understand the contract document may lead in misinterpretation of the needs of the contract which result in loss of trust among the contracting parties had a mean of 4.25 and standard deviation of 1.017, Understanding of contract documentation is very relevant and important to sustain the desired cost, time and quality in contract implementation had a mean of 4.26 and a standard deviation of 1.052.

Additionally, not only the above, the clarity of the contract documents is also considered an important factor determining the understanding of contract documents. Clarity means easy to understand and parties have no difficulty translating the documents with a mean of 4.01 and a standard deviation of 1.020. On average, contract documentation has means between 3.95 and 4.28. According to Tahir and Darton (2010) a mean more than 3.5 indicates that most of the respondents agreed on that variable and the lowest Standard deviation indicates that there is a stability of ideas on the specific variable. Therefore, the mean values between 3.95 and 4.28 indicate that the majority of the respondents agreed that the variable affects perofmance of government projects.

It is thus critical to note that the means of contract documentation lay between 3.5 and 4.5 indicating that on average the contract documentation had a moderate effect on procurement contract management in government projects.

Technical capabilities of contractors

In line with objective number 4, the study sought to determine the effect of contractors' technical capabilities on the performance of construction projects.

Table 6. Technical capabilities of contractors

Statement	Frequency rating					Mean	Std. Dev
	5	4	3	2	1		
Contractors possess adequate resources to cater for possible financial delays from financer	15	26	28	25	10	2.91	1.197
Most contractors have necessary experience in the construction industry	9	24	25	37	9	3.14	1.135
Contractors have sufficient skilled workers to undertake projects	7	24	24	42	7	3.20	1.072
Contractors have adequate quality materials	10	22	34	30	8	3.08	1.083
Contractors have adequate quality equipment	10	25	28	35	6	3.07	1.075
Most contractors are registered with all regulatory boards	8	13	17	50	16	3.52	1.132
Contractors have enough machinery and equipment	12	25	36	24	7	2.93	1.074
Contractors are registered and vetted with relevant regulatory boards/authorities	6	12	25	40	21	3.58	1.094

Findings on technical capabilities indicate that contractors possess adequate resources to cater for possible financial delays from financer had a mean of 2.91 and standard deviation of 1.197. since Meyers (2017) states that the mean value of less than 3.5 in research entails the metrics used moderately affect the dependent variables. It entails that contractors possessing adequate resources moderately affects the performance of government projects. Most contractors have necessary experience in the construction industry had a mean of 3.14 and standard deviation of 1.135, Contractors have sufficient skilled workers to undertake projects had a mean of 3.20 and standard deviation of 1.072 while another of the metrics which is Contractors have enough machinery and equipment had a mean of 2.93 and a standard deviation of 1.074 while Contractors are registered and vetted with relevant regulatory boards/authorities had a mean of 3.58 and a standard deviation of 1.094. According to the study technical capabilities had means between 2.91 and 3.58 and standard deviation between 1.072 and 1.197. the findings above show that technical capabilities of contractors moderate affect performance of government projects in Zambia.

Peat & Barton (2005) further noted that a mean of between 2.5 and 3.5 in a five-point Likert scale indicated that these metrics affected the dependent variable to a Neutral. In this context, technical capabilities impacted the study to a neutral. This implied that on average the respondents felt that the independent variables (technical capabilities) had influenced procurement contract management metrics was agreed upon to more to a neutral.

Project performance

The products satisfy owner's needs had a mean of 3.60 and standard deviation of 0.813, Meeting specification had a mean of 3.58 and standard deviation of 0.794, Projects are completed on budget had a mean of 3.01 and standard deviation of 1.150, The users of the project are satisfied had a mean of 3.54 and standard deviation of 0.907, Projects are completed on time had a mean of 2.81 and standard deviation of 1.046, Project management is efficient had a mean of 3.14 and standard deviation of 0.980, Project team members get satisfied had a mean of 3.25 and standard deviation of 0.886 while Third parties affected by the project are satisfied had a mean of 3.39 and standard deviation of 0.852. Project performance metrics had means between 3.01 and 3.60 and had standard deviation values between 0.852 and 1.150.

Table 7. Project performance

Statement	Frequency rating					Mean	Std. Dev
	5	4	3	2	1		
The products satisfy owner's needs	1	10	34	47	12	3.60	.813
Meeting specification	0	11	35	48	10	3.58	.794
Projects are completed on budget	7	38	23	23	13	3.01	1.150

The users of the project are satisfied	3	10	37	41	13	3.54	.907
Projects are completed on time	6	42	31	17	8	2.81	1.046
Project management is efficient	4	25	35	34	6	3.14	.980
Project team members get satisfied	0	24	38	35	7	3.25	.886
Third parties affected by the project are satisfied	2	14	41	39	8	3.39	.852

Peat & Barton (2005) further noted that a mean of between 2.5 and 3.5 in a five-point likert scale indicated that these metrics affected the dependent variable to a Neutral. While Peat & Barton's findings indicate that the metrics impacted procurement contract management to a neutral, the standard deviation of between 0.852 and 1.150 implied that the data was moderately dispersed from the mean and therefore there was moderate consensus between the metrics and project performance.

The constraints faced by practitioners in effectively managing procurement contracts

According to the study findings, it was established that the primary constraints faced by practitioners in effectively managing procurement contracts for government construction projects include Regulatory requirements and compliance (28.3%), Budget constraints (11.3%), Stakeholder management (17.0%), Scope changes (28.3%) and Risk management (15.1).

Table 8. Primary constraints

Statement	**N**	**%**
Regulatory requirements and compliance	30	28.3%
Budget constraints	12	11.3%
Stakeholder management	18	17.0%
Scope changes	30	28.3%
Risk management	16	15.1%
Total	**106**	**100**

Strategies practitioners employ to mitigate constraints and enhance the effectiveness

The study findings indicate that the strategies that can be used by practitioners include using clear communication and documentation (35%), risk management (15%), performance monitoring (5%), compliance with regulations (25%) and continuous improvement to management of projects (20%).

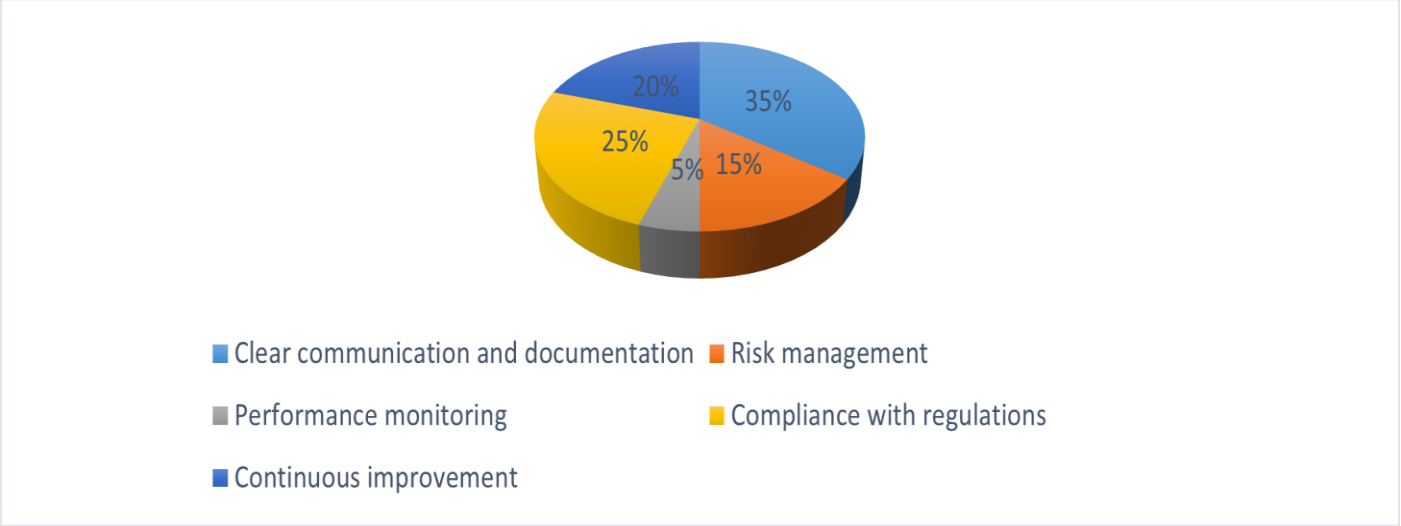

Figure 3. Strategies for Practitioners

Regression analysis

Model summary

The researcher used correlation examination to evaluate the predictive value of the study variables. In this respect, the main study variables were compliance, monitoring, documentation, and technical capacity, while the dependent value was project performance (performance of construction projects). According to the table above, the study shows a linear regression correlation R of 0.252, which shows that there was, indeed, a statistically strong relationship between the four study autonomous factors and the subordinate variable. The R square, which is represented by the coefficient of determination of 0.636, shows that the four independent variables are equal to 63.6% of the variation as far as the dependent variable is concerned. The remaining 36.4% in the independent variable variation reflected other factors not represented in this model.

Table 9. Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.252[a]	.636	.026	.264
a. Predictors: (Constant), Technical Capabilities, Monitoring, Documentation, Compliance				

ANOVA

According to the table 4.9, the p value of the ANOVA stood at 0.0161 (0.01%), which, by all means was below 0.05 (5%) level of significance, it was concluded that the regression model could be said to be a good fit for data, which justified undertaking the regression analysis.

Table 10. ANOVA

B ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.470	4	.117	1.680	.0161[b]
	Residual	6.915	99	.070		
	Total	7.385	103			
a. Dependent Variable: Project Performance						
b. Predictors: (Constant), Technical Capabilities, Monitoring, Documentation, Compliance						

Coefficients

The regression coefficient of -0.137 for the compliance with procurement contractual terms implied that a unit decrease in compliance levels with procurement contract management with the other variables left constant would lead to a -0.137 decrease in procurement contract management. This implies that compliance with procurement contract management on its own is not sufficient to lead to a positive influence on the performance of construction projects and the metric would only lead to a positive influence in collaboration with other independent metrics. The regression coefficient of -0.124 for monitoring of procurement contracts implied that a unit decrease monitoring with the other variables left constant would lead to a -0.124 decrease in project performance.

Table 11. Coefficients

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	1.361	.134		10.175	.000
	Compliance	-.137	.141	-.217	-.976	.331

	Monitoring	-.124	.063	-.202	-1.962	.053
	Documentation	.002	.115	.003	.016	.987
	Technical Capabilities	.035	.123	.040	.281	.779
a. Dependent Variable: Project Performance						

This implies that monitoring of procurement contracts on its own is not sufficient to lead to a positive influence on the project performance and the metric would only lead to a positive influence in collaboration with other independent variables. The regression coefficient of 0.002 for the contract documentation implies that a unit increase in contract documentation would lead to a 0.002 increase in project performance with the other independent variables kept constant. On the other hand, a unit increase in technical capabilities would lead to a 0.035 increase in project performance with the other independent variables kept constant.

In the coefficients table above, the numbers under significance typically refer to the p-values associated with each coefficient. These p-values indicate the probability of observing a coefficient as extreme as the one calculated, assuming that the null hypothesis is true (i.e., that there is no relationship between the independent variable and the dependent variable). A p-value less than a certain significance level indicates that the coefficient is statistically significant, meaning that it is unlikely to have occurred by chance. On the other hand, a p-value greater than the significance level suggests that the coefficient is not statistically significant and should be interpreted with caution. The according to the study findings, the p-values of the study are significant because they are all less than 0.000, 0.331, 0.053, 0.987 and 0.779 significance levels.

Correlation analysis

The correlation analysis indicate that there was a significant relationship between the independent and dependent variables. According to the results, compliance had a positive and significant correlation with project as shown by the coefficient of correlation of (r= 0.294, p= 0.002). Additionally, the results revealed that monitoring had a positive relation with project performance as shown by the coefficient of correlation (r= 0.589, p= 0.000). Moreover, the correlation results showed that contract documentation a weak and positive correlation with project performance as indicated by the correlation coefficient (r= 0.118, p= 0.234).

Table 4.12: Correlation analysis

Correlations						
		Compliance	Monitoring	Contract_ Documentation	Technical_ capabilities	Project_ performance
Compliance	Pearson Correlation	1	.491**	.491**	.400**	.294**
	Sig. (2-tailed)		.000	.000	.000	.002
	N	104	104	104	104	104
Monitoring	Pearson Correlation	.491**	1	.222*	.579**	.589**
	Sig. (2-tailed)	.000		.023	.000	.000
	N	104	104	104	104	104
Contract _ Documentation	Pearson Correlation	.491**	.222*	1	.242*	.118
	Sig. (2-tailed)	.000	.023		.013	.234
	N	104	104	104	104	104
Technical_ capabilities	Pearson Correlation	.400**	.579**	.242*	1	.523**
	Sig. (2-tailed)	.000	.000	.013		.000
	N	104	104	104	104	104

Project_ performance	Pearson Correlation	.294**	.589**	.118	.523**	1
	Sig. (2-tailed)	.002	.000	.234	.000	
	N	104	104	104	104	104
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Technical capabilities were significantly and positively correlated with project performance as indicated by the coefficient of correlation (r=0.523, p=0.000). These results are consistent with those of Kay (2005), which concluded that compliance levels in an organization, monitoring, documentation and technical abilities are among the factors that affect the performance of projects. It can therefore be deduced that Compliance, Monitoring, Contract, Documentation, Technical capabilities all correlated with project performance.

Hypothesis testing

Table 12. Hypothesis testing

Hypothesis	Path	t	Decision
H1	**H_0:** Compliance of contractual terms and conditions does not affect the performance of construction projects. **H_1:** Compliance of contractual terms and conditions affects the performance of construction projects	-.976	H_0 Rejected H_1 Accepted
H2	**H_0:** Monitoring of procurement contracts does not affect the performance of construction projects **H_1:** Monitoring of procurement contracts affects the performance of construction projects	-1.962	H_0 Rejected H_1 Accepted
H3	**H_0:** Contract documentation does not affect the performance of construction projects **H_1:** Contract documentation does affect the performance of construction projects	.016	H_0 Accepted H_1 Rejected
H4	**H_0:** Technical capabilities of contractors does not affect the performance of construction projects **H_1:** Technical capabilities of contractors affects the performance of construction projects	.281	H_0 Accepted H_1 Rejected

DISCUSSION

The discussing is based on the objectives of the study and the study findings.

Compliance with contractual terms

The compliance with contract terms was examined using the following metrics: compliance with the contract conditions by the supplier/service provider enhances procurement contract management, the organization complies with the contract conditions by awarding the contract to the most suitable party, contractors comply with the general contract's conditions, contractors comply with the specific contract's conditions, the organization enforces compliance with contract conditions, there is strong contract compliance between supplier and service provider, contracts are awarded to the most suitable party, procurement contracts are written in clear language, terms and conditions are clear to all parties and contractual compliance is reviewed periodically. All the metrics of compliance with contractual terms had positive response from respondents as on all metrics respondents agreed that they had impact on project performance.

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue XIV November 2024 | Special Issue on Management

According to Spiegel & Stephens (2007), standard deviation refers to the measure of dispersion of the data from its means. The standard deviation of between 0.5 and 1 implied moderate data dispersion from the mean, implying a moderate consensus. Generally, the findings indicate that the contract documentation metrics had standard deviations between 0.965 and 1.156 implying moderate consensus amongst the respondents concerning the influence of compliance with contract conditions on contract management.

The study's findings are in tandem with those of Omary (2017), who explains that a contractual agreement is a legally binding document between two or more parties that outlines the terms and conditions of their business relationship. In the study by Omary (2017), he emphasizes that in procurement, a proper contractual agreement defines the obligations and responsibilities of both the buyer (your organization) and the seller (the supplier). The agreement typically includes product specifications, delivery schedules, pricing, payment terms, warranties, liability provisions, dispute resolution methods, and termination procedures. These terms help ensure that both parties clearly understand what is expected from each other during every procurement stage.

Similarly, Omary (2017) found out that a good contractual agreement should be written in plain language that is easy to understand for all parties involved. It should also be detailed enough to cover all aspects of procurement but not so complex that it becomes difficult to enforce. The contract must comply with relevant laws and regulations governing the industry because it affects project performance.

Monitoring of procurement contracts

The findings of the study revealed that monitoring procurement contracts affects project performance. This is in line with Oluka and Basheka (2014) found out that performance monitoring is a key function of proper contract administration that helps (1) confirm that the contractor is performing all of its duties and obligations per the terms of the contract, and (2) identify and address any developing problems or issues. Most respondents agreed that the metrics used to measure the monitoring of procurement contracts affected project performance. For example, 53.7% agreed that remedies pointed out from monitoring and evaluation reports are implemented accordingly, with 42.4% agreeing while 11.3% strongly agreed. 71.7% of the respondents agreed that terms are clear to the contractors in the procurement contract management of government projects. Majority of the respondents showed that the tender award process is undertaken within reasonable time, implying that there are no unnecessary delays, from the time of tender announcement to award. Additionally, another majority agreed that the government closely screens and oversees venture embraced by temporary workers and other substances. Further, majority of the respondents showed that periodic monitoring and evaluation reports are produced.

Peat & Barton (2005) further noted that a mean of between 2.5 and 3.5 in a five point likert scale indicated that these metrics affected the dependent variable to a Neutral. In this context, the monitoring of procurement contracts means between 3.23 and 3.82. This implied that on average they impacted on contract management to a Neutral. In respect to the standard deviation, the metrics had standard deviation values between 1.047 and 1.84. This implies that data was moderately dispersed from the mean and therefore there was moderate consensus.

It, therefore, can be argued that, according to the findings, contract monitoring guarantees timely expenditure in contract execution and contract monitoring against work done. Despite having some neutral responses, the study established that Contract monitoring ensures the quality of services/goods offered and guarantees timely expenditure in contract execution. In relation to the above, the study by Aisha (2019) on contract monitoring reveals that each contract a company signs ultimately aims to improve operational performance and strengthen the competitive edge. He stresses that managing and monitoring contracts effectively leads to outcomes supporting the core business, benefiting the business partners and improving performance.

Contract documentation

The influence of contract documentation on contract management was examined using different metrics. For example, understanding contract document ensures all the involved parties understand their role and rights in

the contract process. Misunderstanding contract document leads to misinterpretation of the needs of the contract which result in loss of trust among the contracting parties. However, understanding contract documents reduces mistakes in implementation of contract which eliminate unnecessary rework. Understanding contract document is very relevant for sustaining the desired cost, time and quality in contract implementation, and, for effective implementation of a contract the contractor must have the ability to understand the contract document thoroughly.

According to the study, contract documentation had standard deviation values between 0.969 and 1.137. According to Spiegel & Stephens (2007), standard deviation refers to the measure of dispersion of the data from its means. The standard deviation of between 0.5 and 1 implied that there was moderate dispersion of data from the mean implying a moderate consensus. The contract documentation metrics had standard deviations between 0.5 and 1 implying moderate consensus amongst the respondents regarding the influence of contract documentation on procurement contract management on government projects.

The findings revealed that documentation affected project performance because most respondents agreed on the metrics used to measure documentation against project performance. For instance, the study's findings revealed that 80.2% (30.2% agreeing and 50% strongly agreeing) of the respondents agreed that failure to understand the contract document may lead to unnecessary arguments between parties and result in loss of reputation and business. Another 85.5% noted that failing to understand the contract document could lead to poor contract implementation and unnecessary project costs. The study's findings also show that 85.9% of the respondents agreed that failure to understand the contract document may lead to mistakes in contract implementation, which causes unnecessary rework and increases project costs.

Contract documentation affects project performance because, a contract document outlines the rules of engagement, clarifies everyone's roles and responsibilities, and helps ensure everyone is on the same page (Bagaya and Song, 2016). Documentation affects project performance because a contract document serves as a tool to define clearly the expectations and responsibilities of each party involved in the agreement. This is especially important when dealing with complex transactions or agreements, as it helps to ensure that all parties are on the same page. By clearly defining the terms of the agreement, a contract document helps to prevent misunderstandings and disputes that may arise due to a lack of clarity.

Technical capabilities of contractors

The study established that technical capabilities of contractors affected project performance. This is because According to the study findings, majority of the respondents showed that that the experience of the contractor in the construction industry is very critical to project performance. It was further indicated by majority of the respondents that the availability of skilled workers to the contractor leads to improved project performance. In the same vein, another chunk of the respondents shows that the contractor's availability and adequacy of right quality materials is key to better project performance. Further, most respondents indicated that contractors need enough machinery and equipment for improved project performance. All in all, technical capacities of the contractors remain a key component of contract implementation, without which the project cannot be implemented. This is further supported by previous studies that show that technical capacities of contractors in the form of skilled and experienced labor and equipment is critical to ensuring project performance (Paul & Joseph, 2018).

Technical capabilities had a standard deviation between 1.072 and 1.197. According to Spiegel & Stephens (2007), standard deviation refers to the measure of dispersion of the data from its means. The standard deviation of less than 0.5 implies that the data is closely distributed around the mean and there is little dispersion of the data hence a conclusion of high level of consensus of the respondents. A standard deviation of between 0.5 and 2 would imply that the data is moderately distributed around the mean hence an implication of moderate consensus in respect to the measured metrics. On the other hand, a standard deviation of above 2 implies that there is no much consensus with the measured items. In this study, all the metrics for technical capabilities imply a relationship between technical capabilities and procurement contract management on government projects.

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue XIV November 2024 | Special Issue on Management

In another study by Zawislak, Alves, Tello-Gamarra, Barbieux, & Reichert (2012), they argue that technical capabilities cannot be ignored in project performance because technical capability entails not only technical mastery capability, but also the capacity to expand and deploy the firm's core capabilities, and effectively combine the different streams of technologies and mobilize technological resources throughout the firms. Furthermore, technical capability comprises the body of practical and theoretical knowledge, procedures, experience, methods and physical equipment and devices (Ahmad et al., 2014). Technological capability represents a firm's superior and heterogeneous technical resources which meticulously related to the design technologies, product technologies, information and process technologies, sourcing, and integration of external knowledge (Bergek, Tell, Berggren, & Watson, 2008). These components of technical capabilities are responsible for significant positive variation in firm's performance (Bergek et al., 2008).

Technological capability enables firm to identify, acquire and apply new external knowledge to develop operational competencies, which leads to superior performance. Through effective technological capability, a firm creates and delivers new products and services in better and efficient way that best satisfies the customer needs, thus enhances the overall success of firm's new product development and performance (Wang et al., 2006). Hence, according to the study findings, technical capability enables firms to endure the effects of dynamically changing business environment throughout the life of project, right from the startup to the age of corporate social responsibility. Therefore, technical capacities of the contractors remain a key component of contract implementation, without which the project cannot be implemented.

Project performance

Aisha (2019) argues that success criteria of project performance should include hard metrics, such as delivering the project on time and within budget, achieving the project scope, meeting milestone dates, achieving cost targets, reaching specific goals, and managing project risks such as safety, health, environmental and security requirements. On project performance the study established that the majority of the respondents agreed that the products satisfy owner's needs and meet the specification of the contracts. However, on the contrary, majority of the respondents disagreed that projects are completed on budget. According to the study findings, it was further disagreed by the majority that projects are completed on time. Compared to those that disagreed, project management is efficient and project team members get satisfied, this was agreed by 39.7% and 41.5% of the respondents respectively. Despite 38.7% of the respondents remaining neutral, 46.1% of the respondents agreed that third parties affected by the project are satisfied in procurement contract management.

These findings entail that project performance in government construction projects is patchy. It is sometimes successful and sometimes unsuccessful because the metrics used to measure project performance had varied responses which were not very uniform.

The primary constraints faced by Contractors

The study findings established that some of the primary constraints faced by practitioners in effectively managing procurement contracts for government construction projects include: Regulatory requirements and compliance, Budget constraints, Stakeholder management, Scope changes and Risk management. Government construction projects are subject to strict regulations and compliance standards, which can make contract management more complex and time-consuming. Government construction projects often have limited budgets, which can impact the ability to effectively manage procurement contracts and deliver projects on time and within budget. Government construction projects involve multiple stakeholders, including government agencies, contractors, and suppliers, which can create challenges in coordinating and communicating effectively. Changes in project scope can impact procurement contracts and require adjustments to contract terms and conditions, leading to delays and cost overruns. Government construction projects are inherently risky, with factors such as weather conditions, labor shortages, and supply chain disruptions affecting project delivery. Practitioners must effectively manage risks to ensure project success(Dixit, 2022).

Strategies practitioners employ to mitigate constraints and enhance the effectiveness

Clear communication and documentation, risk management, performance monitoring, compliance with regulations and continuous improvement to management of projects were some of the strategies that are employed to enhance effective procurement contract management. Ensuring that all parties involved in the contract are on the same page and that all agreements and changes are properly documented can help mitigate misunderstandings and disputes. Identifying potential risks early on and developing strategies to mitigate them can help prevent costly delays and issues during the project. Regularly monitoring the performance of contractors and suppliers can help identify any issues early on and allow for timely intervention. Ensuring that all parties involved in the project comply with relevant regulations and laws can help prevent legal issues and delays. Practitioners should constantly evaluate their processes and strategies and look for ways to improve efficiency and effectiveness.

Similarly, Kakwezi & Nyeko (2019) in their study established that the procurement process entails an array of protocols and requirements that an organization must satisfy to ensure the efficient acquisition of goods and services. It is necessary for the respective department to ensure the practices comply with the objectives of the entity. For instance, before engaging in procuring any item, such as a vehicle, the professionals must confirm whether the procedures of purchasing the product are met and whether the given budget is approved. The advantage of this function is that it allows the corporation to streamline its processes to avoid possible conflict. Its weakness is denying the organization the ability to engage in a quick process since all the steps and necessities have to be evaluated and verified.

LIMITATIONS OF THE STUDY

The scope of the study was limited to Officers in the government ministries. However, since other private sector organisations do undertake procurements of construction projects and contract management, the findings of this study will be useful to their operations. The same is applicable to non governmental organisations who deal with contractors who are service providers to both government and private sector.

However, this study conformed to a deductive research approach which allows the results to be generalized to the findings to the study population(Saunders, et al., 2009). Hence the study findings can be applicable to general contract management involving private sector procurement.

CONCLUSION

From the findings, the researcher concluded that compliance with the contract conditions by the supplier/service provider enhances procurement contract management in state corporations. State corporations comply with contract conditions by awarding the contract to the most suitable party. The study further concluded that state corporations comply with general and specific contract conditions. Regarding contract documentation, the researcher concluded that failure to understand the contract document potentially leads to mistakes in the implementation of the contract which caused unnecessary rework and increase in project cost. Understanding contract documents is relevant in sustaining the desired cost, time, and quality in contract implementation. For effective implementation of a contract, the contractor must have the ability to understand the contract document thoroughly. Monitoring procurement contracts is important in project management because it helps the contractors to remain focused. Continuous monitoring of progressive project performance is key to project satisfaction.

Finally, the researcher concluded that contract monitoring ensures the quality of services/goods offered. Contract monitoring guarantees timely expenditure in contract execution and enhances the relationship between the parties. The study concluded that compliance with contract terms and conditions and monitoring procurement contracts were metrics that on their own, could positively influence contract management. These metrics must work conjunctively with other metrics for them to lead to a positive influence on project performance. On the other hand, contract documentation and technical capabilities were seen to be impactful on project performance as they could lead to a positive change in contract management.

RECOMMENDATION

The following are the recommendations:

1. The study recommends that for companies to improve on project performance, the government must emphasize contract documentation and contract monitoring of projects. This can be done by ensuring Contract Managers are involves at the outset of the project and are knowledgeable of the contents of the contract.
2. Procurement contract management teams must identify effective incentives and penalties to ensure the contractor achieves the desired outcomes. This can be done by documenting the incentives and highlighting the incentives to the Contractor at the start of the project.
3. Emphasis should be done on contractors to review and understand the contract requirements, including the case company invoicing requirements, during kick-off meetings. This will act as reminder for contractors to meet the contract requirements.
4. Before a contract is awarded to a new contractor, state corporations should get recommendations from their previous clients for their capability in delivering service or goods; Physical site visits to the shortlisted potential bidders should be done to verify what had been submitted in bidding documents before the award of contract.
5. Whenever there is a significant difference in the total contract amount offered by bidders, the lowest technically compliant bidder, rates must be checked and verified to see if they are within the market range.
6. The study suggested that further studies be conducted on procurement contract management in private construction projects, to establish the experience of private sector with contractor performance and constraints as a benchmark to public sector.

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